PULP & PAPER

FEBRUARY 1955

More new mills for West and South and Canada—31 "sure" new machines

see page 54

What's in store for industry at Paper Week

see page 60

1955 PAPER WEEK "STARS"

☆

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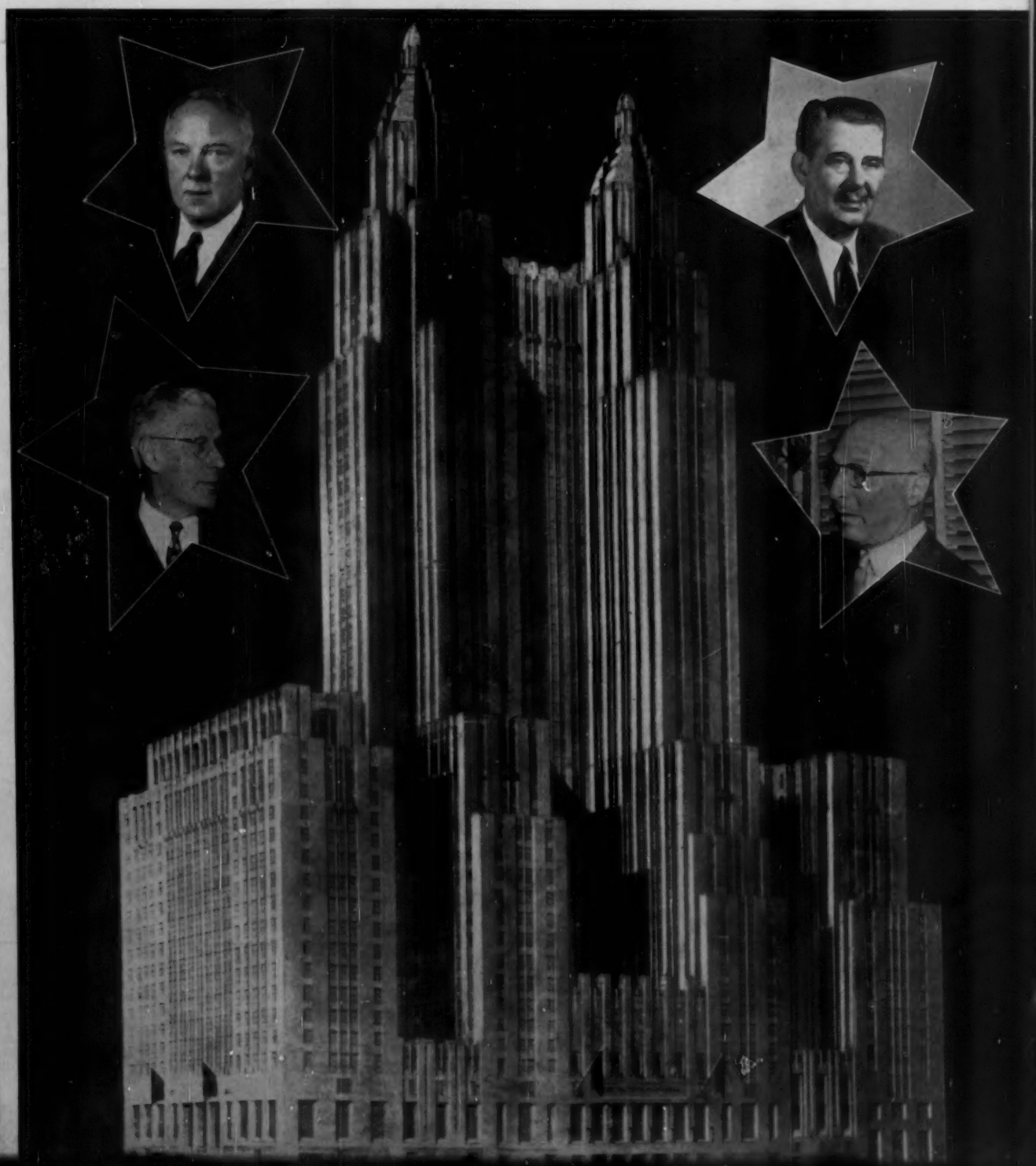
☆

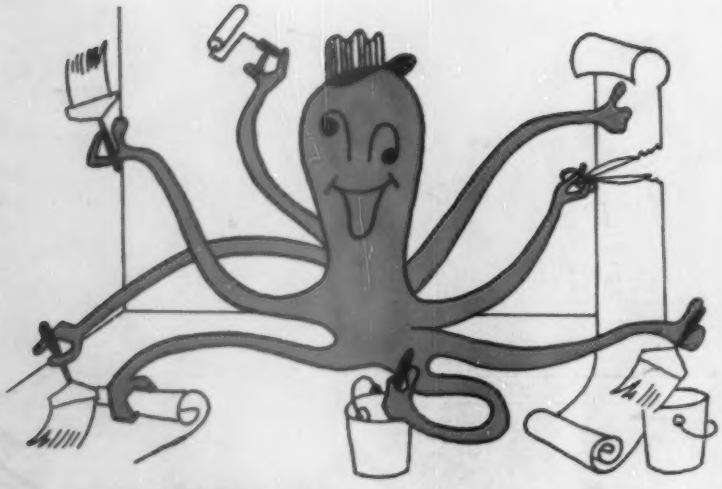
DON LESLIE Hammermill *(lower left)*

J. B. FAEGRE M & O *(upper left)*

WALTER SHORTER Camp Mfg. *(upper right)*

DAVE ZELLERBACH Crown Z *(lower right)*





The difference is—

PAREZ® Resin 607

is as efficient as an 8-armed paperhanger

Once in your paper mill, PAREZ 607 goes to work like a one-man gang. Here are the 8 big jobs it does—the 8 big reasons why PAREZ 607 is preferred by so many mills:

1. **PAREZ 607** delivers wet strength *at the reel.*
2. **PAREZ 607** gives consistent results from grade to grade in all commonly used pulps.
3. **PAREZ 607** is efficient in low, high and neutral pH's, and at lower drier temperatures, too.
4. **PAREZ 607** needs no alum or catalysts . . . reduces wet press sticking.
5. **PAREZ 607** cuts beater time and power costs . . . gives better drainage, faster drying, higher dimensional stability and lower tendency to curl.
6. **PAREZ 607** improves wax and rosin size efficiency . . . gives less foam trouble on machines, less "pitch" in systems.
7. **PAREZ 607** dry powder in bags means lower shipping costs, easier handling, less storage space . . . and, it has a shelf life well over a year.
8. **PAREZ 607** is a MELOSTRENGTH® resin, the fastest mover in the paper market ...backed by the national MELOSTRENGTH Promotion Program.

Every one of these reasons spells profit. So ask your Cyanamid representative for full details on how to get and how to use PAREZ 607.

THE LARGEST VARIETY OF PAPER CHEMICALS, *to serve every industry need, is offered by Cyanamid, and is backed by the services of technical experts with years of practical mill experience.*

Recent Mill Developments With Cyanamid's Paper Chemicals...

Don't judge the effect of size color on paper brightness until you try it. Recent tests of a number of sizes in bleached sulphite pulp showed that color of size is not wholly related to brightness of sized paper. Your Cyanamid representative can give you the details.

* * *

Highest pick test a western mill has ever had on starch coated offset sheet was secured by addition of PAREZ 620 Resin at rate of 20% on starch weight. Dennison Pick went from 11 to 20 on felt side, and 14 to 20 on wire side.

* * *

Pigment usage is halved in super white coated board by an eastern mill through addition of 1% sodium phospho aluminate as aid in filler and fiber retention. The saving in titanium dioxide pigment is $4.50 per ton of board over and above cost of added S. P. A.

AMERICAN Cyanamid COMPANY

PAPER CHEMICALS DEPARTMENT

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Sales Offices: Boston • Charlotte • Chicago • Cleveland • Kalamazoo • Los Angeles • Mobile • New York • Philadelphia • Portland, Ore. • Seattle

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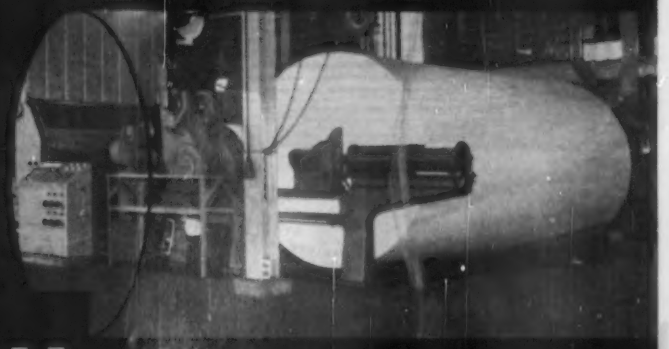

King Size...

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or regular

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RICE BARTON REELS are designed and built to suit YOUR Production Requirements.

RICE BARTON

RICE BARTON CORPORATION
Worcester, Massachusetts
Paper Machine Builders Since 1837
West Coast Distributor: Ray Smythe
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RB2-55

The superior quality of OK BRAND starches gives you improved tub, beater, and calender sizing. Better for coating and adhesives, too. When you make better paper at no extra cost — you've put more profit in your "paper work". Try OK BRAND and see! Discuss your special starch requirements with Hubinger's expert technicians.

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ESTABLISHED IN 1901
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Try these top-quality starches for paper makers:

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- OK BRAND E-Type Pearl
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- OK BRAND Pre-Jel
- OK BRAND Thin Boiling Starch
- OK BRAND Oxidized Starches

PULP & PAPER

Production and Management Magazine of the Industry

February, 1955
Vol. 29—No. 2

IN THIS ISSUE

More Facts on U.S. Foreign Mills Aid	51
What's Going on in the Market Pulp World	52
More New Mills for West and South	53
Kimberly-Clark Goes West to Expand	57
What's in Store at "Paper Week"	60
After Buenos Aires—What Next?	66
What's New in Canada's No. 1 Industry	70
New Deculator-Cleaner Process Removes Air and Dirt	72
Papermaker Develops Tail Cutter	100
Dorr-Oliver Merger Proves a Natural	104
Equipment and Supply Co. News	114
PULPWOOD SECTION	
Case History of "Dealer" in the South	81
Concentration Yard Solves Dilemma	84

PERSONALS

Middle West	6	Pacific Coast	18, 22
Northeast	6, 10	Canada	22, 26
South	14		

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COMMENT

Two Proposals for 1955

We made two suggestions in these columns in 1954 which have had some enthusiastic support.

1. That there be a Paper Week for the whole U.S.A., to further paper uses. Like Cotton Week, etc. After all, what deserves it more. Paper is the third fastest growing industry in U.S., and there is nothing—absolutely nothing—used more extensively than paper, except water.

2. That the pulp and paper industry be commemorated on a suitable U.S. stamp. Our proposal elicited a cordial and official promise from the U.S. Postoffice Department that such a stamp would be given consideration when, and if, a proposed stamp series on industry is instituted.

These still seem worthy goals for this industry.

Better Forest Data Needed

In contrast to fire, forest insects send up no mushrooming smoke clouds or spectacular flames; they don't make big headlines. By the time their results (brown patches of dead trees) become noticeable to the casual observer, the insects have already picked up population momentum and may well be on their way to epidemic infestation.

The traveling public does not see the untold forest losses taking place as insect kill beyond field of vision from the roads. Only a relatively small number of us realize the extent of forest destruction.

Nor is it just the layman who is short of information. The U. S. Forest Service itself badly needs additional data. One of the 10 regional U. S. supervisors recently told PULP & PAPER that this greatest of American timber ownerships does not have realistic inventories of its standing timber; it doesn't even have adequate maps.

In other words, the U. S. organization managing over 73,000,000 acres of USFS commercial forest land does not have sufficient essential tools for most effectively going ahead with construction of an integrated road system on national forests—an absolute essential for forest utilization and management.

The U. S. Forest Service generally recognizes need for better management, but it is bogged down by red tape, "policy" and underfinancing. Despite these handicaps, the Service has done a mighty good job for U. S. citizens during its first fifty years, which it completes Feb. 1, 1955. Congratulations and best wishes to the USFS on its Golden Anniversary!

19,000 More Readers for PULP & PAPER

Union Bag & Paper Corp. had 19,000 reprints made of PULP & PAPER's feature article (Sept. 1954 issue) which described the phenomenal growth of that company and described and illustrated the modern industrial installations and machinery which went into expansion of its Savannah mill.

The reprint was sent to every Union Bag stockholder. Presumably many of these are have more than a passing interest in this industry.

We are very proud of the letter which accompanied the reprint, signed by Alexander Calder, president of Union, in which he said: "The completion of our latest plant development program prompted PULP & PAPER to do a broad overall story on our company.... All of us in the Union Bag organization are proud of this editorial acknowledgement of our company's leadership in the paper industry."

Announcing!

. . a great new development . .

simultaneous removal

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VORVAC

Trade Mark

Leading mills continue their progressive policy of keeping abreast of latest developments by the installation of Nichols Freeman Vorvac systems.

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Results:

MILL BENEFITS—directly by better product control and appreciable savings.
CUSTOMER BENEFITS—through improved product.

Learn how you can benefit through the use of the Vorvac system.
Write for Bulletin 228

Nichols Engineering & Research Corporation

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Eliminates
Foam Killers

Eliminates
Headbox Showers

Increases
Production

Decreases
Steam Requirements

Eliminates
Foam on Machine

Increases
Sheet Density

Improves
Drainage on Wire

Improves
Suspension of Fibres

Decreases
Slime Spots

PULP & PAPER PERSONALS

MIDDLE WEST NEWS

Henry Joins Brittain; Douglas Heads Escanaba

C. WOLCOTT HENRY, Princeton graduate and formerly Cincinnatian, has joined the Mead pulp sales force in the Midwest under Vice President DAVE BRITTAIN, with headquarters at 20 Wacker Drive, Chicago. Mr. Henry's travel will be primarily in Ohio, Indiana and Michigan territory. Also assisting Mr. Brittain is BOB CALLAHAN, who continues to cover the Wisconsin and Minnesota area. Mr. Henry served a year in The Mead Corp. training school in Chillicothe, O.

ERNEST G. BENNETT, English-born veteran manager of Mead's Escanaba, Mich., mill, retired as of Dec. 1 but he is still living there. G. S. DOUGLAS is the new manager at Escanaba.

GERALD G. JOHNSTON, who was 41 years old, mill manager of folding grades division, of Waldorf Paper Products Co., St. Paul, Minn., died recently, shortly after his promotion from chief chemist. He graduated from Illinois in 1935 and got his m.e. and ph.d. at the Institute of Paper Chemistry. His widow is former DORIS BOETTCHER, formerly an Institute secretary. Four children survive.

WILLIAM B. COOK, formerly in charge of paper coating development at Champion's Texas mill, is new paper coating supt., M & O Paper, International Falls, Minn. He is an Iowa State graduate. JEROME P. BREZINSKI, Wisconsin graduate and with ph.d. from the Institute, has joined M & O's research dept.

LAWLOR DAVIS has joined the application laboratory staff of American Cyanamid Co.'s Paper Chemicals Dept. for the Western Division in the new Cyanamid building on Kimball St. in Chicago. He came there from three years' research work at the Institute of Paper Chemistry. He is a University of Toronto graduate and formerly worked in I. P. mills in Three Rivers, Que.

FOSTER P. DOANE, production manager at Bergstrom Paper Co., Neenah, Wis., is now also a vice president of the company.

ELBERT C. LATHROP has retired as head of the Agricultural Residues Section of the U. S. laboratory at Peoria, Ill. He was former tech. director of Crown Z, and vice pres. of Celotex. He will continue active in cellulose fields. His address is 6516 Mt. Hawley Rd., Peoria 4, Ill.

W. DONALD BROWNELL is new sales mgr. of KVP Co. He was with them 20 years.

ROBERT L. LEAF, JR., is vice president in charge of development for Shawano Paper Mills, Shawano, Wis.

CHARLES R. HERTER is new district mgr. of J. O. Ross Engineering's Detroit office. JOHN MELCHOIR is new sales engineer in the office.

PAUL MICHAEL, Champion's finishing dept., Hamilton, O., is proudly ready to chat these days of his son Bill, Ohio State football star in the Rose Bowl game.

BERT LARSON, former chief engineer, Beloit Iron Works, died in December in Beloit, Wis.

CHARLES MULCAHY, who taught business management in Illinois Institute of Technology and has an m.s. from Georgetown U., has joined Charmin Paper Mills' manufacturing dept.

BERT FOURNESS, Kimberly-Clark headquarters, recently returned from a trip to South Africa for the company.

ROBERT MAYER is new associate purchasing agent, Central States Paper & Bag Co., St. Louis.

JIM MILLS, paper field man for Wyandotte in the Chicago area, brought Mr. Brunner and MELISH A. THOMPSON, mgr. of field sales from Wyandotte, Mich., to a recent superintendents' meeting in Minnesota.

CHARLES KELLEY JR., who moved to Midwest for H. Waterbury & Sons, and Mrs. Kelley have found themselves a new apartment home in Grand Rapids, Mich. Their address is 283 Morris Southeast.

L. S. SIMSER, 237 East Wilson St., Appleton, formerly of American Cyanamid, now represents Penick & Ford in that area.

DAN CHAPMAN, representing Morden Machines, Rotabelt, Fulton Iron and other lines, has a new address in Appleton, 2120 No. Union St.

BAXTER IN NEW POST; HASKELL ASST. SALES HEAD

JOE BAXTER, JR. (left), who has devoted his entire career to research and development for paper industry, is Director of a new Research & Development Dept. for all Black-Clawson Cos., according to President CLIFF R. CRAWFORD. Joe had been Coordinating and Development Engineer at the Shartle Division, has been with B-C since 1928.

W. D. (BILL) HASKELL (right), is new Asst. Sales Mgr. of the Dilts Division of Black-Clawson, Fulton, N.Y., as announced by R. J. JACOBS, Manager of Sales and Engineering there. Mr. Haskell has been with Dilts since 1939.

NORTHEAST NEWS

Weldon is Exec. V.P.; Brown Promotes Goodloe

ROY V. WELDON, director and former vice president, Great Northern Paper Co., has been elected executive vice president, according to M. C. McDONALD, president.

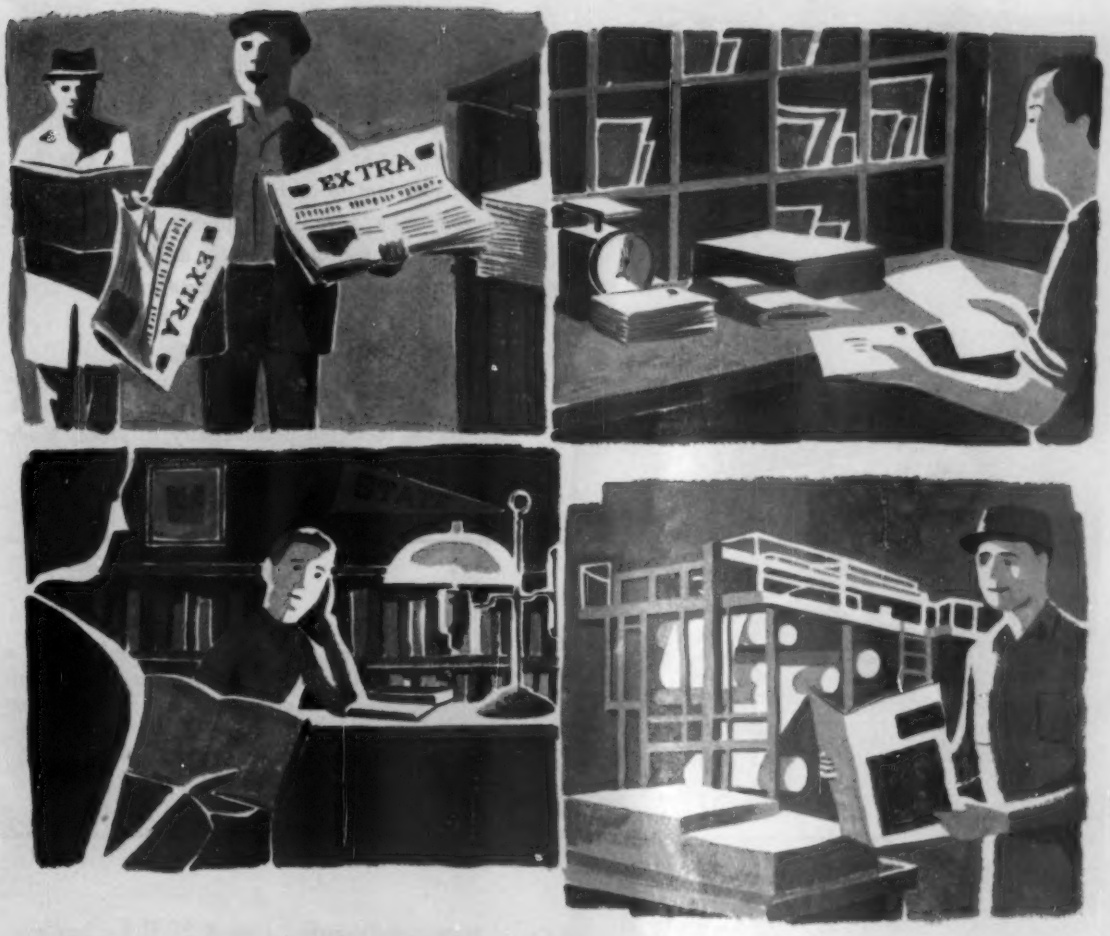
J. DANIEL BOWDEN, a 17-year veteran at Scott Paper Co., Chester, Pa., is director of their newly created product development dept., to expand and intensify Scott's product planning. Succeeding him as head of Scott's marketing research dept., is GORDON A. HUGHES, former director, market analysis dept., General Mills, Inc. J. GEORGE BREITLING, former sales personnel mgr., is now asst. industrial sales mgr. FRED L. WITT, former asst. industrial sales mgr., has been named mgr. of industrial planning, a new post, in which he will direct field testing of products, analysis of industrial markets and overall appraisal of industrial distribution channels.

JAMES W. GRIFFITH has been named safety director, Riegel Paper Corp., succeeding WILLIAM M. GILLINGHAM, new asst. personnel director.

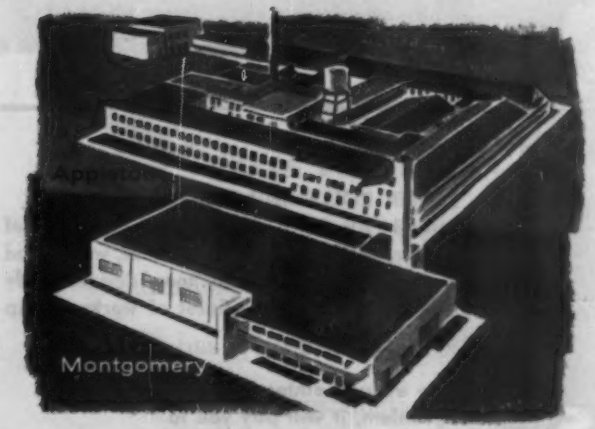
SIDLEY O. EVANS, has been named to new post of mgr. of tubing operations, The Babcock & Wilcox Co.'s Tubular Prods. div. plant in Beaver Falls, Pa.

DR. PAUL M. GOODLOE takes over a newly created position as director of control for Brown Co., Berlin, N. H.

Continued on page 10



Paper enlightens--informs--entertains



General Offices, Appleton, Wisconsin

Plants at Appleton, and Montgomery, Alabama.

To every man, the printed page means many things: the texts that educate—news that shapes the world from Des Moines to Dien Bien Phu—the documents and information vital to his work—the "good book for tonight" that lets him relax, laugh, or be moved. Words on paper . . . nourishing the mind—rounding out the man—immortalizing all the sounds and furies that make up life.

And in at the very start of publishing paper—in every field where paper goes to work...Fourdrinier wires. Appleton Wires. Good wires—by a 59-year test of industry-wide acceptance and use.

Appleton Wire Works, Inc.

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has the answer to your Maintenance and Modernization Problem

Famous Jones engineering, and over one-hundred years' experience with every type mill and all kinds of paper, are at your service . . . insure satisfaction, whatever your requirements, when you specify JONES maintenance, repair and modernization parts and accessories.

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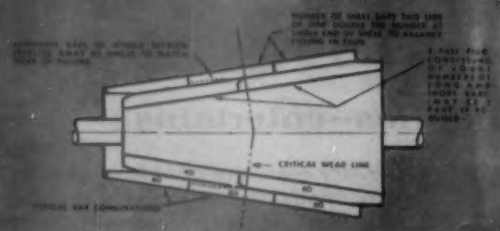
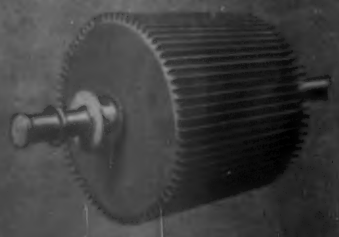
Type P-B PLUG. Dynamically balanced at operating RPM. Easy refilling — no bands to shrink on. Bands mounted permanently in place. Made in sizes to fit any make or size of Jordan.

Greylock Shell Filling. Pre-assembled in a rugged conical assembly. Harrigan design with patented Nowave feature. Bars and woods of any desired standard materials.



Nowave Patented Plug & Shell Fillings provide precise plug and shell alignment, better and more uniform refining, straighter bar wear — no waves or shoulders, longer filling life.



BEATER ROLLS AND BED PLATES

Built in all types and sizes for any make of beater, JONES Beater rolls, bars, woods and bed plates incorporate advanced design, sturdy construction and the finest of workmanship and materials.

On every maintenance or replacement problem, it will pay you to consult your Jones representative *first*.

E.D. Jones

E. D. Jones & Sons Company, Pittsfield, Mass.

BUILDERS OF QUALITY STOCK PREPARATION MACHINERY

In Canada: The Alexander Fleck Limited, Ottawa

Above: Beloit engineering conference: E. S. Skinner, Pat Patterson, Roy Martens

"FACE LIFTING" frequently eliminates factors that may be hampering machine performance in your own plant—an antiquated headbox, inadequate Fourdrinier section, lack of a suction second press, and the like. Beloit Iron Works has rebuilt many an older paper machine—in whole or in part—and brought production abreast of competition—*Beloit Iron Works, Beloit, Wis.*

BELOIT

WHEN YOU BUY BELOIT...YOU BUY MORE THAN A MACHINE!

PAPER MACHINERY

PULP & PAPER — PERSONALS — Continued

NORTHEAST NOTES

HARRY E SMITH, vice pres. in charge of rubber products sales and a director of Raybestos-Manhattan, Inc., has retired after 45 years.

WALTER C. NELSON has been named supt., paper finishing services at Kodak Park, according to **IVAR N. HULTMAN,** Kodak v.p. and gen. mgr. of the plant.

R. ALLYN BUDINGTON, JR., has been elected treasurer, Rayonier, Inc. according to **CLYDE B. MORGAN,** pres. He replaces **LAWRENCE G. WILSON,** who died Dec. 16. Mr. Wilson had joined Rayonier in 1936 and was treasurer since 1944. Mr. Budington has been comptroller and asst. treasurer. He is an alumnus of Harvard Business School and Williams College.

STEIN, HALL PAPER MGR.; LOCKPORT MANUF. CHIEF

KENNETH ARNOLD (left) is new Manager of Paper Mills Dept., Stein, Hall & Co., Inc., New York. He joined Stein, Hall in 1933 and is succeeded as Chicago Sales Branch Mgr. by ROBERT HAHN, who in turn is succeeded as Cincinnati Acting Mgr. by CLEMENT D. NEVIN JR.

HOWARD F. BROWN (right) is new Vice Pres. in charge of Manufacturing for Lockport Felt Co., Newfane, N. Y., as announced by **RAYMOND J. LEE, President.** Born in Bradford, Pa., "Brownie" joined Lockport in 1926 and has been Gen. Supt. since 1951.

HAROLD H. HOLDEN, pres., Eastern Corp., Bangor, Me., has appointed **GEORGE W. GRIFFIN** as sales mgr. He was formerly vice pres. and genl. sales mgr., Whiting Paper Co., and sales mgr., Gilbert Paper Co.

DONALD A. (PAT) MORAN, who resigned as resident manager of St. Regis Paper Co.'s Deferiet, N. Y. mill, is continuing as consultant on staff of **W. R. ADAMS,** vice pres. of mfg., until Apr. 1. Mr. Moran joined St. Regis in 1950.

GEORGE W. KESSLER has been appointed chief engineer, The Babcock & Wilcox Co.'s Boiler Div., according to **W. H. ROWAND,** vice pres. in charge of engineering for the division. Mr. Kessler has been with B & W since 1930 after graduating from Illinois.

DR. R. H. LUECK, former genl. mgr., American Can Co.'s research and technical dept., has been elected vice pres. in charge of that dept. He is a graduate of Carroll College, Waukesha, Wis., and received his m.s. at Wisconsin.

ORVILLE C. MUNGER, CZ Carthage resident engineer, is vice president of Northern New York Cerebral Palsy Assn., a group assisting in organizing aid for handicapped children in that area.

CHARLES F. THEOBALD has been named general traffic mgr., Robert Gair Co., Inc., N. Y. He joined them in 1953 and has 33 years railroad freight work experience.

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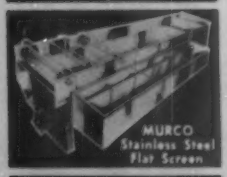

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Trademark of a Specialized Service to the Paper Industry

To the paper industry we offer a specialized service based upon over seventy years close association with the needs of paper manufacturers. Write today for complete catalog information on any items in which you are interested . . . no obligation for our Engineering Department recommendations.

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- Knot Screens
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- Quick Opening Gate Valves
- Roll Heading Machines
- Mechanical Winder Shafts
- MURCO Collard Winder Shafts
- Power Dam Gate Hoists
- GRID Unit Heaters
- GRID Blast Coils

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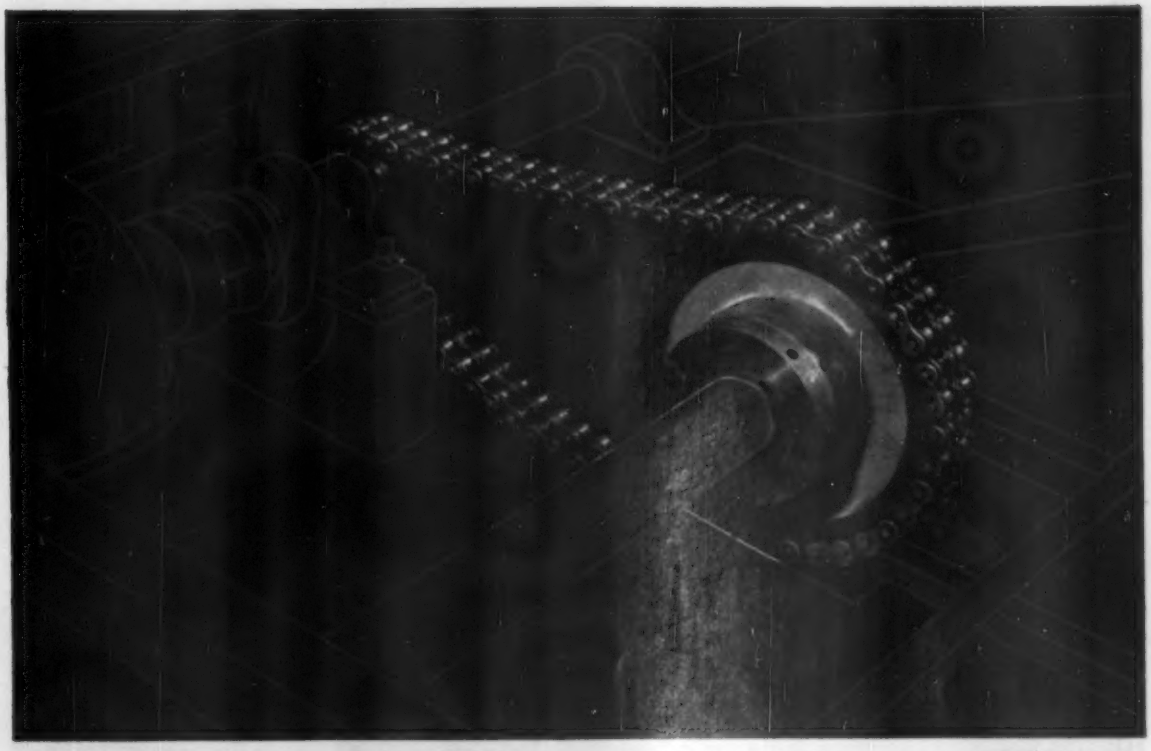
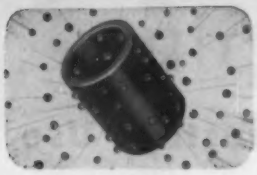
WAUSAU WISCONSIN

Manufacturers Since 1883



PRE-STRESSING of multiple width chain provides uniform load distribution.



SHOT-PEENED ROLLERS have greater fatigue life, added ability to withstand impact.

CLOSER HEAT-TREAT CONTROL — coupled with rigid testing insures uniformity.

LOCK-TYPE BUSHINGS (applied on a range of sizes) end a cause of stiff chain.

How EXTRAS* like these cut your roller chain costs

*And you pay no premium for these LINK-BELT extras

LINK-BELT Precision Steel Roller Chain meets the three big requirements for lower drive and conveyor costs.

(1) Long life— Added manufacturing refinements like the four shown above are your assurance that Link-Belt roller chain lasts longer.

(2) Low maintenance costs— High resistance to wear eliminates frequent adjustments.

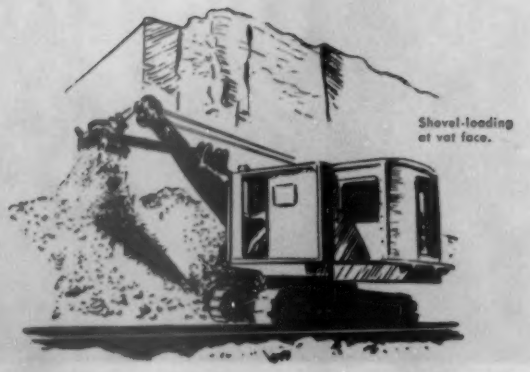
(3) High efficiency — Positive action, independent of atmospheric conditions. No power loss through slippage or excessive bearing friction.

You can get complete information from 148-page Data Book 2457. It covers single and multiple width roller chain and sprockets in ¼″ through 3″ pitch, 1″ through 3″ double pitch. Ask your nearest Link-Belt office or authorized stock carrying distributor for a copy today.

LINK-BELT

ROLLER CHAIN & SPROCKETS

LINK-BELT COMPANY: Executive Offices, 307 N. Michigan Ave., Chicago 1. To Serve Industry There Are Link-Belt Plants, Sales Offices, Stock Carrying Factory Branch Stores and Distributors in All Principal Cities. Export Office, New York 7; Canada, Scarboro (Toronto 13); Australia, Marrickville, N.S.W.; South Africa, Springs. Representatives Throughout the World.



Shovel-loading at vat face.

Crude Sulphur

for Industrial Use

from the properties of

Texas Gulf Sulphur Co.

75 East 45th Street • New York 17, N. Y.

Producing Units

- **NEWGULF, TEXAS**
- **MOSS BLUFF, TEXAS**
- **SPINDLETOP, TEXAS**
- **WORLAND, WYOMING**

Another great tractor by Oliver ...THE POWERFUL OC-12 CRAWLER!

It's a rugged, eager worker in the 45 drawbar h.p. class that features advancements in power, economy and operating ease to make every job more profitable.

The OC-12 offers two engines of exceptional torque span—diesel or gasoline. Both engines have instant electric starting, pressure cooling, by-pass thermostat and full-flow oil system to insure quick starting and long, low-cost service.

The smooth lines of this unit show it is made for easy access and operator visibility. Controls are right where they're the handiest. Down to the key-lock switch, foam rubber seat, overhead-linkage clutch, this tractor caters to operator convenience.

Your Oliver Industrial Distributor will be glad to demonstrate the OC-12. Give him a call.

The OC-12 is available in two track widths: 44- and 60-inch—and two track lengths, one with four lower track wheels and one with five. Standard grousers are 14-inch.

Oliver OC-12 with hydraulic 1-yd. loader. This model has the long track frame for added stability. Loader has exceptional bucket rotation and 10′ 4″ loading height.

THE OLIVER CORPORATION
400 W. Madison Street, Chicago 6, Illinois

OLIVER

a complete line of industrial wheel and crawler tractors

PULP & PAPER PERSONALS — Continued

SOUTHERN NEWS

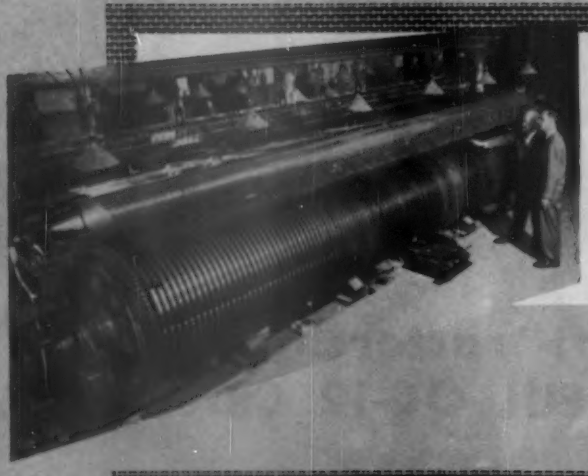
Bullock at East Texas; Perro is H & W Supt.

T. B. BULLOCK has resigned his post as tour foreman in Fibreboard products' San Joaquin Div., Antioch, Calif., to join the East Texas Pulp & Paper Co., Evadale, Tex.

WALTER L. PERRO is the new pulp mill supt. of the Hollingsworth & Whitney division of Scott Paper Co. at Mobile, Ala.

FRED SCHELHORN is new plant manager of the Mill Division of National Container at Jacksonville. He was moved there from the NCC Valdosta mill.

there's a GIANT under our roof



THIS GIANT NEW LOOM—

now weaving fourdrinier wires is the largest in the United States. It can weave wires 292" wide or two 145" wires. Tomorrow may see still larger looms, but whether large, medium, or small, the objective at Eastwood-Nealley is to construct the finest and the most efficient looms in the business. The aim of our continuing modernization program and the goal of our research is to be able to anticipate and meet in advance the growing needs of the great pulp and paper industry.

Eastwood-Nealley builds its own wire weaving looms. This loom's push-button controls have made fourdrinier wire production as automatic as is possible, with the added benefit of greater precision.

EASTWOOD-NEALLEY CORPORATION
Belleville, N. J.

BOB MILLER, representative of Bird Machine Co. in a newly established Southern office, has moved his family to Decatur, Ga. The correct address is 1334 Clairmont Circle.

R. M. (RUEY) SHETTER JR., of Shartle Bros. sales staff, has succeeded R. C. (POP) STEWART as traveling representative of that Black-Clawson division in the South. Pop has retired to Santa Monica, Calif., near the home of a daughter.

ROY S. HAYNES, chemical recovery supervisor of Champion's Canton, N. C., mill, has one of the finest Hereford herds in the area and is new president of the Western N. C. Hereford Assn.

JAMES J. HANRATTY is new manager of a Texas district office opened at 5343 McCormick St., Houston, Tex., by Graver Water Conditioning Co., according to H. T. SULCER, v. p. and gen. mgr.

REAVIS C. SPROULL, director of Herty Foundation, is new president of Savannah Kiwanis Club.

W. BEEKMAN HUGER, assistant treasurer, Champion Paper, is new vice president of Western N. C. Associated Communities.

W. H. BAILEY, general personnel director, Sonoco Products, Hartsville, N. C., is a national vice chairman of the 1955 Red Cross campaign.

WILLIAM B. GUERRANT has been named new field representative in charge of technical assistance in uses of Dow Chemical Co. plastic coatings in Georgia, Florida, the Carolinas and Alabama. He will headquarters at Dow offices in Atlanta.

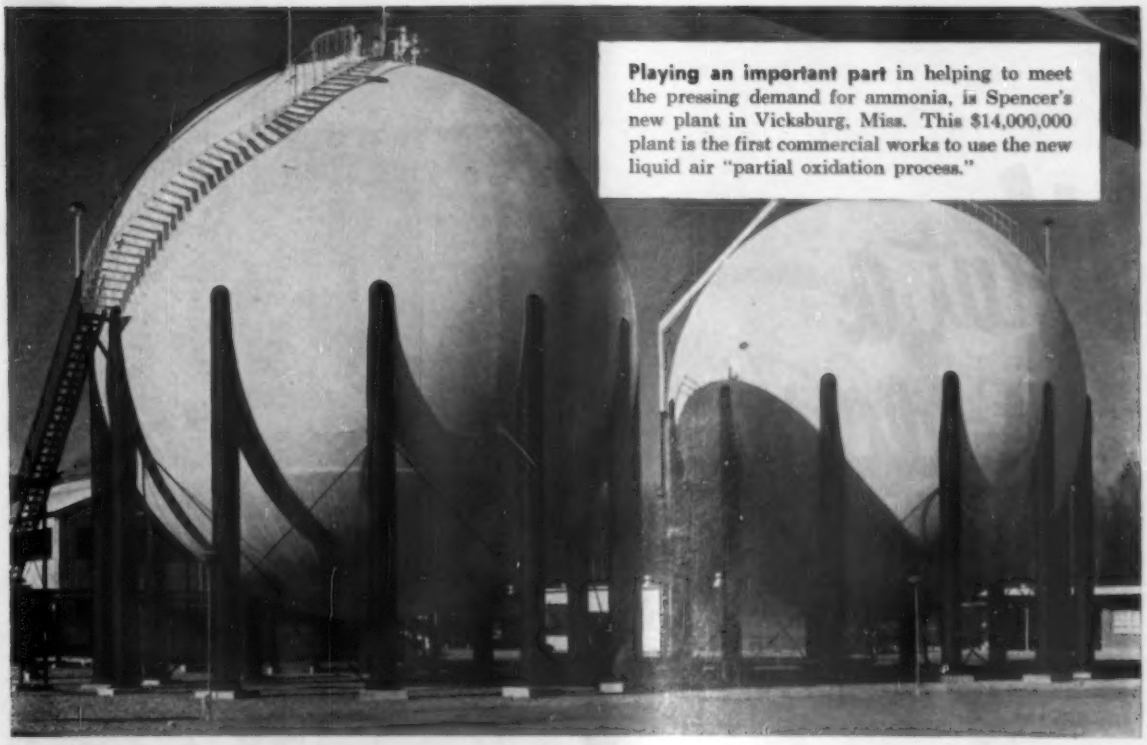
FLOYD L. BODDIKER is new manager of the combined cellulose plants of Hercules Powder Co. at Hopewell, Va. ORVAL J. HAND and FREDERICK J. BOUCHARD are named superintendents, the former of the chemical cotton (linters pulp) and caustic-chlorine facilities, the latter of the sodium carboxymethylcellulose and ethyl cellulose facilities.

CECILIA DICKERSON, sorting line forelady at Champion's Texas mill is actually a native of Pasadena, Tex., a rarity.

HARRY V. MITCHELL, controller, Gulf States Paper Corp., is new member of Controllers Institute of America.

L. C. LEWIS, Berryville, Va., is new district mgr. for American Forest Products Industries, Inc., Raleigh, N. C., covering the Carolinas and Virginia.

Continued on page 18



Playing an important part in helping to meet the pressing demand for ammonia, is Spencer's new plant in Vicksburg, Miss. This $14,000,000 plant is the first commercial works to use the new liquid air "partial oxidation process."

Now You Can Switch to Ammonium Bisulphite...with Confidence

New Ammonia Plants Assure Adequate Supply for Pulp Mills

Latest reports show that mill owners who have switched to ammonium bisulphite pulping have lower costs and higher profits. Also, the greater ease with which ammonium liquors can be evaporated and burned has helped solve another increasingly urgent problem—that of disposal.

Perhaps you have hesitated to make the change — even though test runs indicated that you have everything to gain. You may have feared getting caught in an ammonia shortage.

If so, you need worry no longer. Huge new facilities, like Spencer's $14,000,000 plant at Vicksburg, Mississippi, mean that adequate and reliable supplies of ammonia are now available to all mill owners. As a result, many owners are *reconsidering* the advantages of ammonium bisulphite pulping.

Maybe you wonder how these newest developments affect *your* future. Why not send us your questions? Just write: Technical Service Section, Spencer Chemical Company, Kansas City, 5, Mo.

Here's how you can save with ammonium bisulphite:

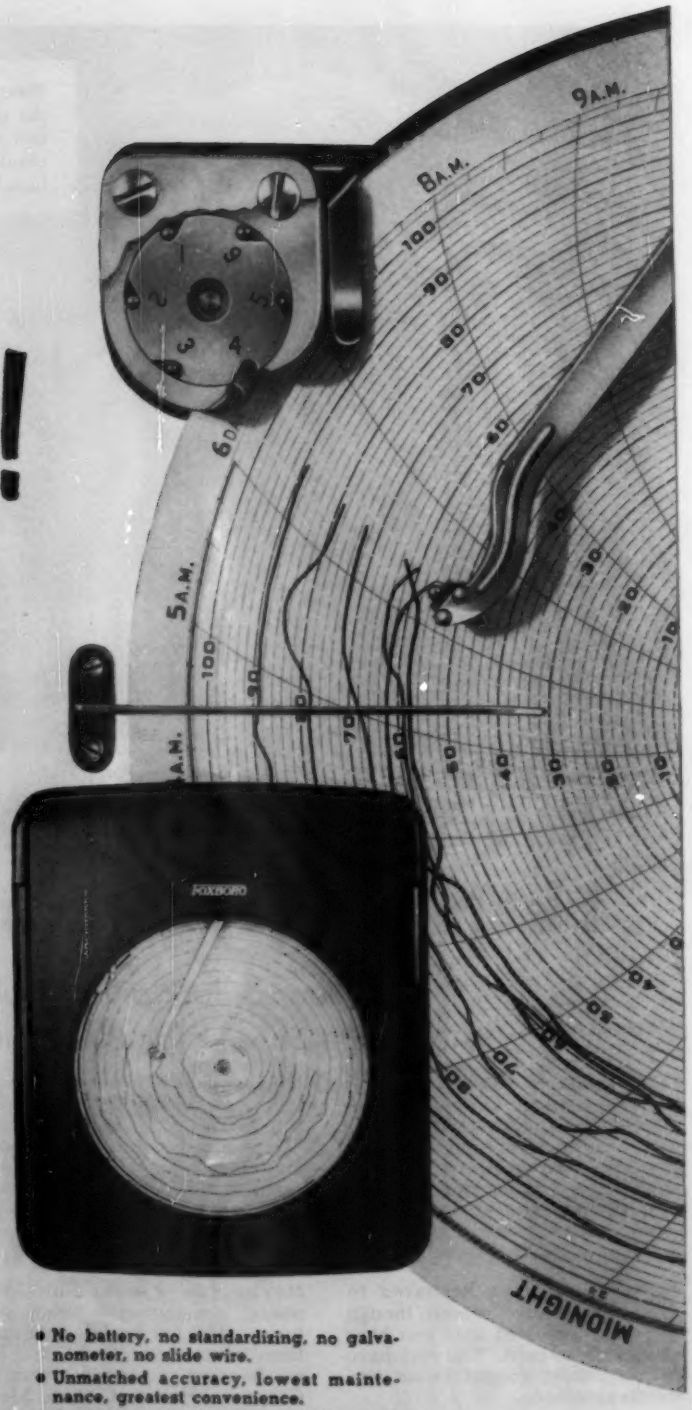
1. Shorter cooking time.
2. Lower cooking temperatures.
3. Higher yields of pulp.
4. Hardwoods can be pulped.
5. Operations cleaner and more uniform.

SPENCER® SPENCER® SPENCER®

Spencer Chemical Company • America's growing name in chemicals

What a record!

...6 Color-coded Temperature Records on one ROUND Chart



THE MULTI-RECORD *Electronic* DYNALOG*

What convenience! What economy! You can record up to 6 related temperatures on a single *circular* chart with this Foxboro Multi-Record Dynalog. Not only saves panel space, but simplifies comparison of records. There's only one pen arm — yet all 6 records appear in different, distinctive colors. Bulletin 427-1 tells the complete story. (Bulletin 444 describes the Multi-Record *Pneumatic* Receiver). Write for your copy. The Foxboro Company, 992 Neponset Ave., Foxboro, Mass., U.S.A.

*Reg. U. S. Pat. Off

Check these outstanding features

- High speed recording — only 6 seconds between prints for quick detection of process variations.
- Uses convenient, low cost circular charts.
- Each record line has its own distinctive, non-smudging color.
- No battery, no standardizing, no galvanometer, no slide wire.
- Unmatched accuracy, lowest maintenance, greatest convenience.
- Available with alarms or on-off control.
- Thermocouple or resistance-bulb types.

FOXBORO REG. U. S. PAT. OFF. MULTI-RECORD DYNALOG

FACTORIES IN THE UNITED STATES, CANADA, AND ENGLAND

a new ***standard of quality in***

PULP

LABORATORY CONTROLLED

for

- Extra Cleanliness
- Extra High Brightness
- Extra Strength

EAST TEXAS *Pulp and Paper Company*

Evadale, Texas

Telephone Silsbee, Texas: Evergreen 5-3711

Eastern Sales Office, 122 East 42nd Street
New York City

PERSONALS — Continued

PACIFIC COAST NEWS

New Antioch Supt.,
New Homes for Salesmen

L. C. LAMBERSON has been appointed boardmill superintendent, Fibreboard Products, Inc., San Joaquin Division, Antioch, Calif. He takes the place of C. H. DUNN who resigned to accept a position at Crossett, Ark. D. R. FULLER has been appointed technical assistant to Mr. Lamberson, L. E. FRANK became boardmill tour foreman, J. RUCK, assistant pulp supt., D. D. FOSTER, pulp tour foreman, and R. E. HEAPY, pulp tour foreman.

BRIAN SHERA, Penn Salt representative in Tacoma, Wash., serving Coast mills, is expected to become a grandfather soon. His son, Ed and his wife, Joan, are expecting their first-born.

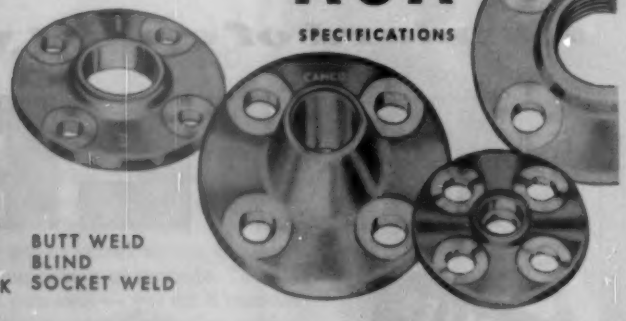
NOW!

CAMCO PRODUCTS, INC.

Corrosion Resistant Pipe Fittings offers:

as regular stock items a complete line of Forged Flanges to full

ASA SPECIFICATIONS



SCREWED
SLIP ON
LAP JOINT
REDUCING
LOVEKIN
FLOOR
WELD NECK

BUTT WELD
BLIND
SOCKET WELD

All flanges furnished with serrated faces. Supplied and stocked in types 304, 304L, 316, 347. Other analyses on application.

MSS . . . CAMCO Continues its leadership in the field as a supplier of stainless steel corrosion resistant Flanges to MSS specifications.

Use attached coupon for Flange Dimensional Slide Rule and Catalog covering complete line.

MAIL TODAY

CAMCO Products, Inc. P&P
445 State Street
North Haven, Conn.
Gentlemen:
☐ Please send Flange Dimensional Slide Rule.
☐ Catalog #653 covering complete line.
☐ Furnish address of area distributor.
☐ Put us on your mailing list to receive your stock list.
Name
Company
Address
City and State

CAMCO Products, Inc.
445 STATE STREET, NORTH HAVEN, CONNECTICUT

TAKE NEW POSITIONS

VICTOR S. RISLEY JR. (left), of Oak Grove, Ore., who has joined staff of Dan Charles Agency on Pacific Coast and will handle Wisconsin Wire, Knox Felts, Wm. Hopper & Sons and Pulp & Paper Mill Accessories Ltd. lines. His grandfather is JACK JOHNSON, veteran salesman on the Coast, and Mr. Risley formerly represented Morey Supply. His wife is Sally Risley. MRS. VERNICE M. CHARLES heads the Charles Agency.

HAROLD E. BINGHAM (right) is new Acting Director of Product Sales for Spencer Chemical Co., Kansas City, Mo. He succeeded GEO. TAYLOR. Mr. Bingham has been with Spencer since 1946 and organized its Traffic Dept.

ORA HISEY, whose appointment as v. p. and production mgr. of the new Western Kraft Corp. container board mill being built by Ira C. Keller and associates at Albany, Ore., returns to his home state in his new work. The former vice president of Sandy Hill graduated from Willamette University in Oregon, in 1924, and his first mill job was at Salem, Ore.

ANTHONY GUSTIN, who retired as Rayoniers pulp supt. at Hoquiam, Wash., last year, is enjoying time now for steelhead fishing and hunting. Tony went west from Octone Falls, Wis. His wife died just a month before he retired.

ROY KELLER, who represents Huyck in the Far West, has a home now at 3375 Southwest Underwood, Beaverton, Ore.

L. V. (Luke) THIEL and family have settled down at 209 Riverside, Camas, Wash., he represents Orr Felt. Luke has a son in Kalamazoo and daughter at home.

V. MALLIN, formerly with Herman Simpson, Seattle consulting engineer, has joined West Tacoma Newsprint Co., as Mechanical engineer.

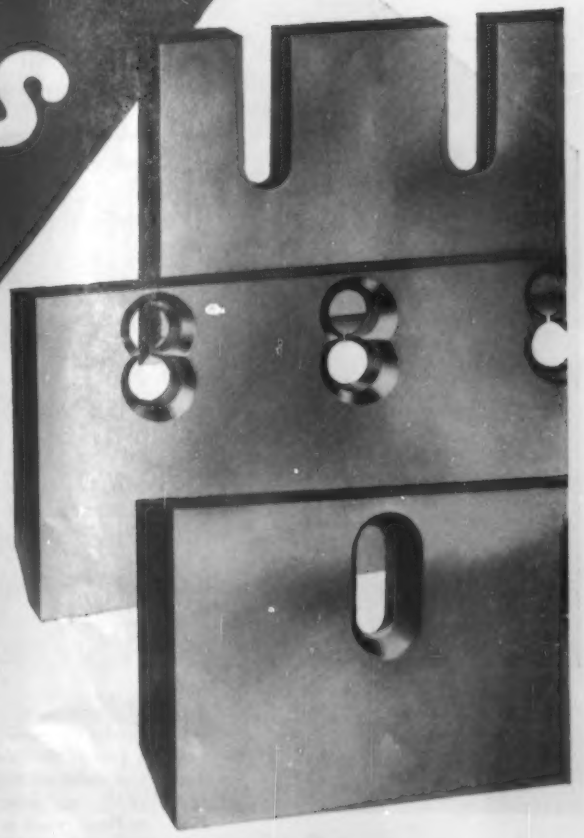
RALPH LAWRENCE, personnel safety director, Port Angeles, Wash., division of Fibreboard Products, is state chairman for the Labor-Management Safety Conference Mar. 3 & 4 at Olympic Hotel, Seattle.

D. L. OSBORNE, CZ West Linn personnel supervisor, has been elected treasurer of Oregon chapter of American Society of Training Directors.

Continued on page 22

Get the DUST OUT of your PROFITS

...with SIMONDS T-18 CHIPPER KNIVES



More usable chips . . . clean-cut and uniform in size . . . with a minimum of slivers and dust . . . this is what you *want* from your woodroom . . . this is what you *get* with SIMONDS T-18 KNIVES on your chippers! Made of extra tough steel developed and poured in Simonds own Steel Mill, these rugged, shock and abrasion resistant knives are known for their ability to take the high speed, brutal beating of chipper operation . . . to hold a keen cutting edge . . . to turn out clean-cut, uniform chips. Try T-18 Knives on *your* chippers . . . get the dust out of *your* profits. Order through your Industrial Distributor.

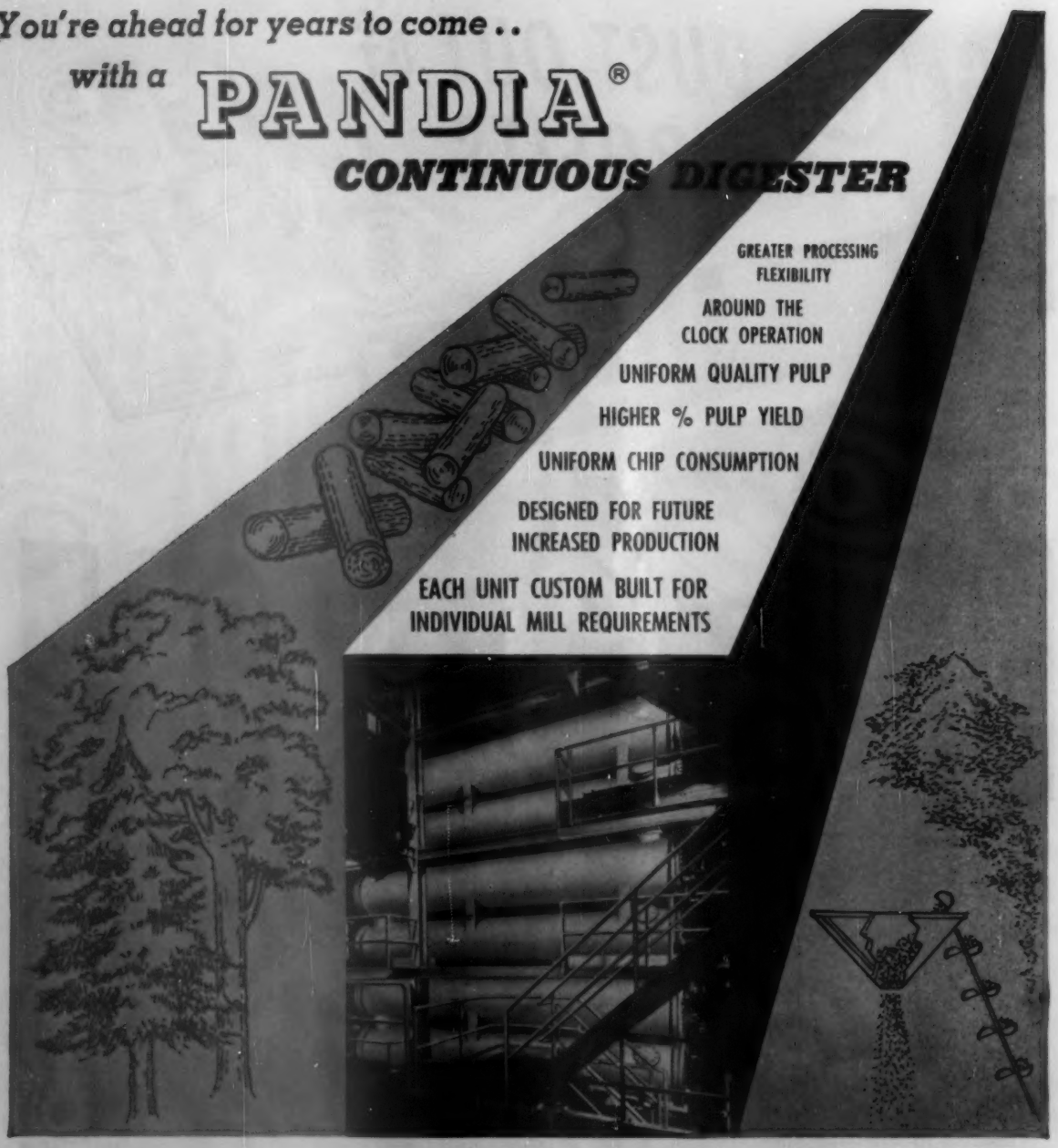
SIMONDS SAW AND STEEL CO.
FITCHBURG, MASS.

Factory Branches in Boston, Chicago, San Francisco and Portland, Oregon, Canadian Factory in Montreal, Que.
Simonds Divisions: Simonds Steel Mill, Lockport, N. Y., Simonds Abrasive Co., Phila., Pa. and Arvida, Que., Canada

You're ahead for years to come . .

with a **PANDIA®**

CONTINUOUS DIGESTER


GREATER PROCESSING FLEXIBILITY
AROUND THE CLOCK OPERATION
UNIFORM QUALITY PULP
HIGHER % PULP YIELD
UNIFORM CHIP CONSUMPTION
DESIGNED FOR FUTURE INCREASED PRODUCTION
EACH UNIT CUSTOM BUILT FOR INDIVIDUAL MILL REQUIREMENTS

Sources for pulp wood and the spiralling demand for paper products are problems which need no longer plague mill operators. The PANDIA Continuous Digester provides around-the-clock production of uniform high grade pulps at lowest possible cost and is designed for future increased production. The unit shown above is part of the expansion and modernization program of the American Box Board Filer City Plant, which is one of many leading mills here and abroad enjoying the advantages of the PANDIA Continuous Digester.

Manufactured and sold in Canada by
THE ALEXANDER FLECK LIMITED, OTTAWA, CANADA.

PANDIA

PANDIA INC.

122 EAST 42nd STREET • NEW YORK 17, N. Y.

Division of THE BLACK-CLAWSON COMPANY

WANT TO

INCREASE PRODUCTION AS MUCH AS 25%?

LOWER PULPING COSTS?

...then switch to the Ammonium Bisulphite Pulping Process... pioneered by the Nitrogen Division

These are the facts!

Raise Production—Faster and more thorough penetration cuts cooking time by 19% or more, with the same maximum temperatures and pressures, giving that much more production. In addition, the penetrating period with ammonia base is less critical.

Reduce maintenance costs—damage is considerably reduced because of the tremendous decrease in solid and insoluble materials passing through the system.

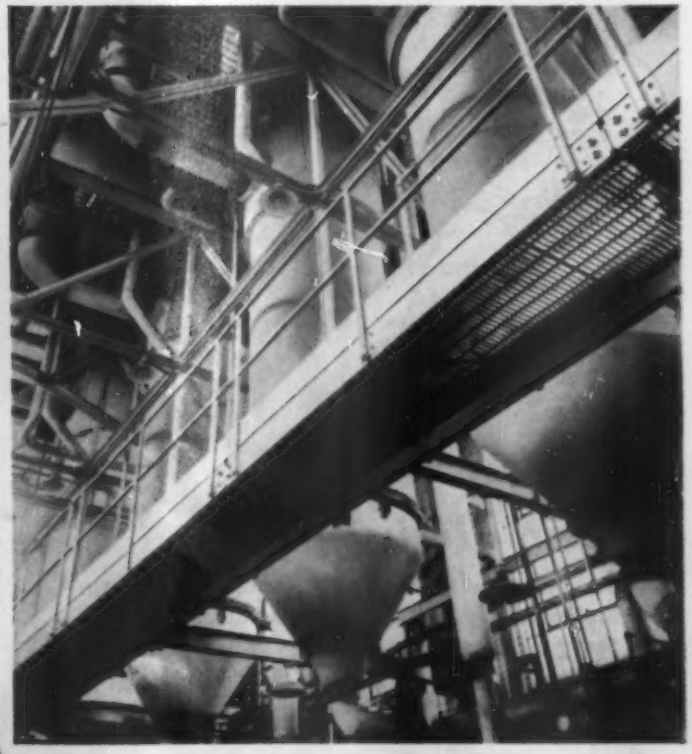
Save up to 40 lbs. of sulphur per ton of pulp—due to more efficient absorption of SO_2 in ammonium bisulfite solution.

Save the cost of labor and handling of limestone—Anhydrous Ammonia unloads from tank cars under its own pressure piped to an automatic system. There is no waste at all and the cost of lime unloading is eliminated.

Other big advantages: you increase pulp quality, increase pulp yield, decrease percent screenings, increase equipment life, increase wood specie handles, eliminate scaling, evaporate waste liquors easily, reduce stream pollution to a minimum.

Leading mills have converted to the Ammonium Bisulphite Pulping Process because they found pulp production is increased while pulping costs go down.

The changeover to this Pulping Process is inexpensive. A minimum replacement—and in many cases, no replacement—of equipment is involved, and there is practically no loss of production during conversion.



WRITE TODAY!

- Send for full details on the Ammonium Bisulphite Pulping Process.
- Ask for a Technical Service man to call. No obligation!

NITROGEN DIVISION ALLIED CHEMICAL

Anhydrous Ammonia

NITROGEN DIVISION

ALLIED CHEMICAL & DYE CORPORATION
40 Rector Street, New York 6, N. Y.
Hopewell, Va. • Ironton, Ohio • Orange, Tex. • Omaha, Neb.

Anhydrous Ammonia • Ammonia Liquor • Ammonium Sulfate • Urea Sodium Nitrate • Ethanolamines • Ethylene Oxide • Ethylene Glycol Diethylene Glycol • Methanol • Formaldehyde • U.F. Concentrate—85 Nitrogen Solutions • Nitrogen Tetroxide • Fertilizers & Feed Supplements

PACIFIC COAST NOTES

A. B. LAYTON, CZ vice president, San Francisco, has been elected a director of Western Pacific Railroad Co.

PETER P. TARANOFF, of St. Helens Pulp & Paper Co., has been promoted from technical supervisor to technical assistant to paper mill superintendent.

VICTOR E. HECHT, vice president of Zellerbach Paper Co., has retired after 47 years active service. He began as an office boy at Los Angeles division in 1907.

A. R. "ART" HOOKER, Pioneer-Flintkote Co., Los Angeles, chairman of Paper Makers & Associates of Southern California was host to the last meeting at Flintkote's cafeteria. Later they crossed the street and inspected Container Corp.'s mill, where **WALTER QUINN** is manager.

IF YOU WANT IT FABRICATED

NWC's YOUR MAN

Northwest Copper Works is the pioneer fabricator of Stainless Steel for the Paper Industry...SERVICE is a by-word...FOLLOW-THROUGH is a Must...GUARANTEED SATISFACTION means what it says.

14" Swing Check Valves with Surge Pots, for Northwest Paper Mill.

Specializing in:

- Stainless Steel Products
- Stainless Steel Tubing
- Stainless Steel Valves
- Stock Valves
- Stainless Steel Fabrication
- Stainless Steel Fittings
- Stainless Steel Pipe
- Copper Smithing
- Lead Linings
- Lead Burning

NORTHWEST COPPER WORKS

1303 N. RIVER STREET
PORTLAND 12, OREGON

PHONE MURDOCK 2191

ROBERT W. STEVENS, paper mill consultant, Los Angeles recently returned from his semi-annual trip to Sweden where, for Fiskeby Fabriks, A. B. Norrkoping, he designed a large mill.

FRANK A. DRUMB, president of St. Helens Pulp & Paper Co. and assistant vice president of Crown Zellerbach, was guest speaker at "bosses' night" of Pacific Northwest Personnel Management Assn., Portland, Ore.

GEORGE LaHUSEN, Crown Z assistant general safety supervisor, has been elected president of Pacific Northwest Personnel Management Assn., Portland, Ore. Chapter.

WILLIAM LITTLE, office manager of Crown Z West Linn division, became mayor of West Linn Jan. 1 when term of M. A. **WILSON**, CZ purchasing agent, terminated.

JAMES McENRY, superintendent of steam power, CZ Camas, has taken early retirement and is devoting himself to raising pedigreed livestock at his Cape Horn farm.

RONALD L. CLARK has been appointed supervisor of market research and development of Brea Chemicals, Inc., Brea, Calif., subsidiary of the Union Oil Company of Calif., it was announced by **JACK TIELROOY**, Manager of Development for Brea. Mr. Clark was formerly assistant director of market research for the Vick Chemical Co. and subsidiaries, New York.

B. R. COLKETT for the past several years, secretary-treasurer, Fibreboard Products Inc., San Francisco, has been appointed a vice-president of the company.

CANADIAN NEWS
New Managers Named

C. T. CLARK has been appointed manager of Fraser Companies Edmundston, N. B., mill, succeeding **V. H. EMORY**, who was recently appointed manager of manufacturing, pulp and paperboard.

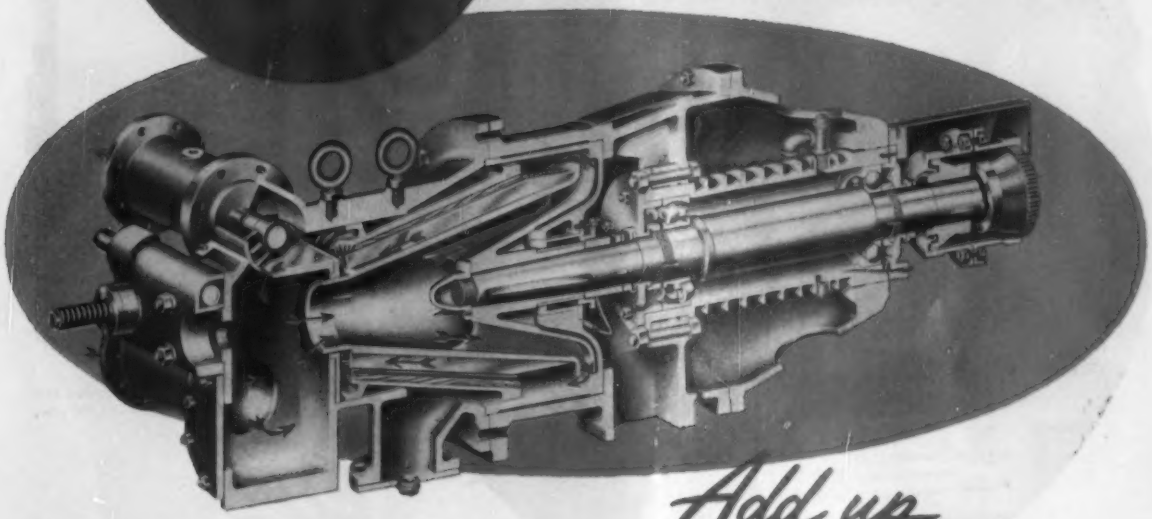
G. C. BEATTEAY has been named manager of the Atholville, N. B., mill, (Restigouche) succeeding Mr. Clark. **E. O. HOUGHTON** stepped into the vacancy created by Mr. Beatteay's appointment, and **L. G. SEARS** assumes Mr. Houghton's former position as superintendent at Atholville. **H. G. LARLEE** is superintendent of groundwood and woodhandling at Edmundston.

HARRY C. PIM, vice president of Crown Zellerbach Canada Ltd., and for many years head of the sales organization of Pacific Mills, was honored recently on his 35th year with the company.

Continued on page 26

MORDEN *Stock-Maker*

combines the best time-proven beating principles into one simple versatile machine.



Hundreds of "Stock-Makers" throughout the world, operating on all types of pulps and grades of paper, have proven the effectiveness and efficiency of "Stock-Maker" beating—from light brushing for soft tissue, to medium treatment for writings, wrappings, etc., on up through extreme hydration for greaseproof and carbon.

"Stock-Makers" can be used advantageously for continuous, single-pass, closed-system beating, direct to the paper or board machine. They can be readily adjusted to handle many variations in treatment requirements.

Add up

these advantages over conventional beaters

- **REQUIRES 1/2 THE POWER PER TON**
- **REQUIRES 1/3 THE SPACE**
- **REQUIRES NONE OF THE LABOR**
- **SAVES MAINTENANCE COSTS**

the Answer... MORDEN-IZE!

MORDEN SLUSH-MAKER FOR PULPING
MORDEN STOCK-MAKER FOR BEATING
MORDEN STUFF-MAKER FOR JORDANING

GET ALL THE FACTS!
Send for "Stock-Maker" brochure.

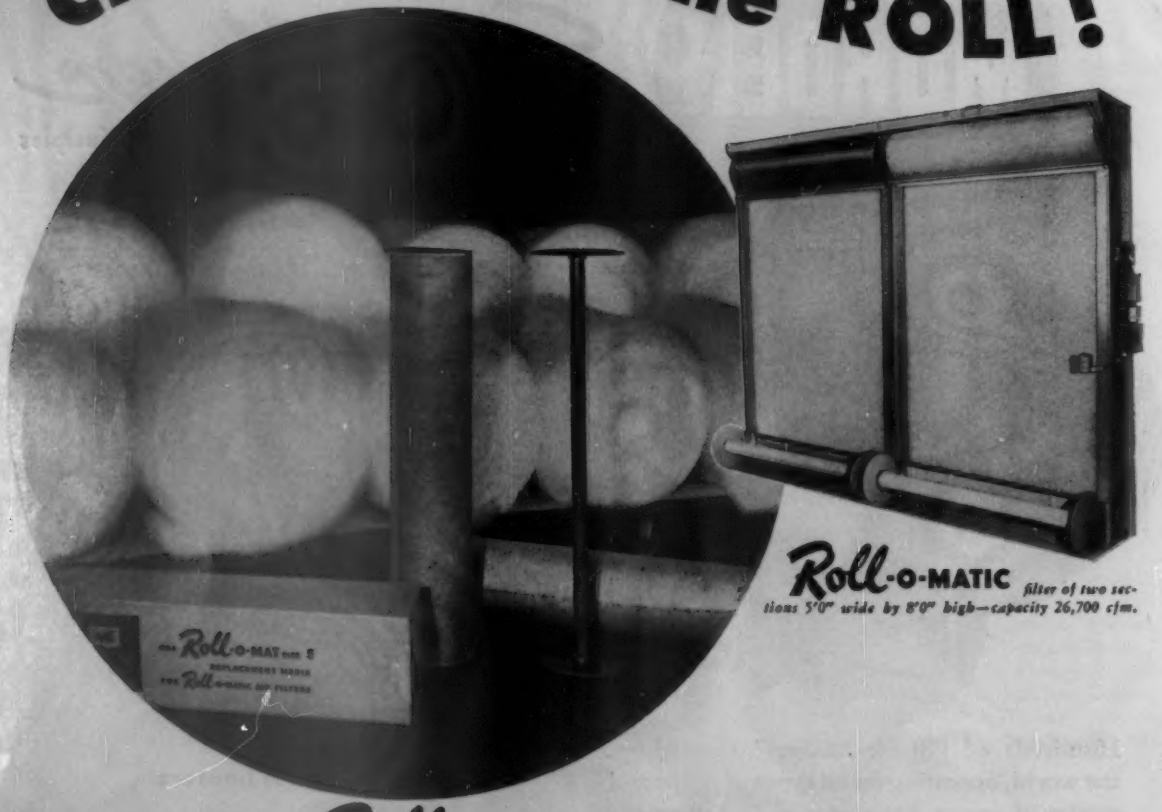
Northeastern States Representatives:
ORTON CORPORATION, Fitchburg, Massachusetts

Midwestern States Representatives:
DAN B. CHAPMAN, Appleton, Wisconsin

Other Representatives in most paper-making countries.

MORDEN
STOCK PREPARATION EQUIPMENT
MACHINES COMPANY
3420 S. W. MACADAM — PORTLAND, OREGON

Clean Air by the ROLL!



Roll-O-MATIC *filter of two sections 5'0" wide by 8'0" high—capacity 26,700 cfm.*

Magic Roll-O-MATIC Makes Once-a-Year Air Filter Maintenance a Reality!

Believe it or not, you're looking at ROLL-O-MATIC'S renewable media filter curtain before and after packaging for installation. Each of those fluffy, white bundles is a "blanket" of bonded glass fibers 5 ft. wide and 70 ft. long. Then—presto—when wrapped on a spool, it becomes one of the 13" diameter rolls shown in the foreground.

Equipped with this versatile media, ROLL-O-MATIC's efficiency and economy is obvious. Mounted in roll form at top of filter, the media moves as a continuous curtain down the face of the unit and is re-rolled on a spool at bottom. Movement of curtain is controlled by an automatic time switch which introduces sufficient clean material to maintain the desired operating resistance.

Results? Field reports indicate *one roll* of this low cost material represents a *year's* supply for 18,000 cfm capacity. That's half the cost of disposable filters of equal capacity—and think of the man-hours saved!

"Clean air by the roll" can mean big cash savings for you. Get the facts from your local American Air Filter representative or write for Bulletin 248.

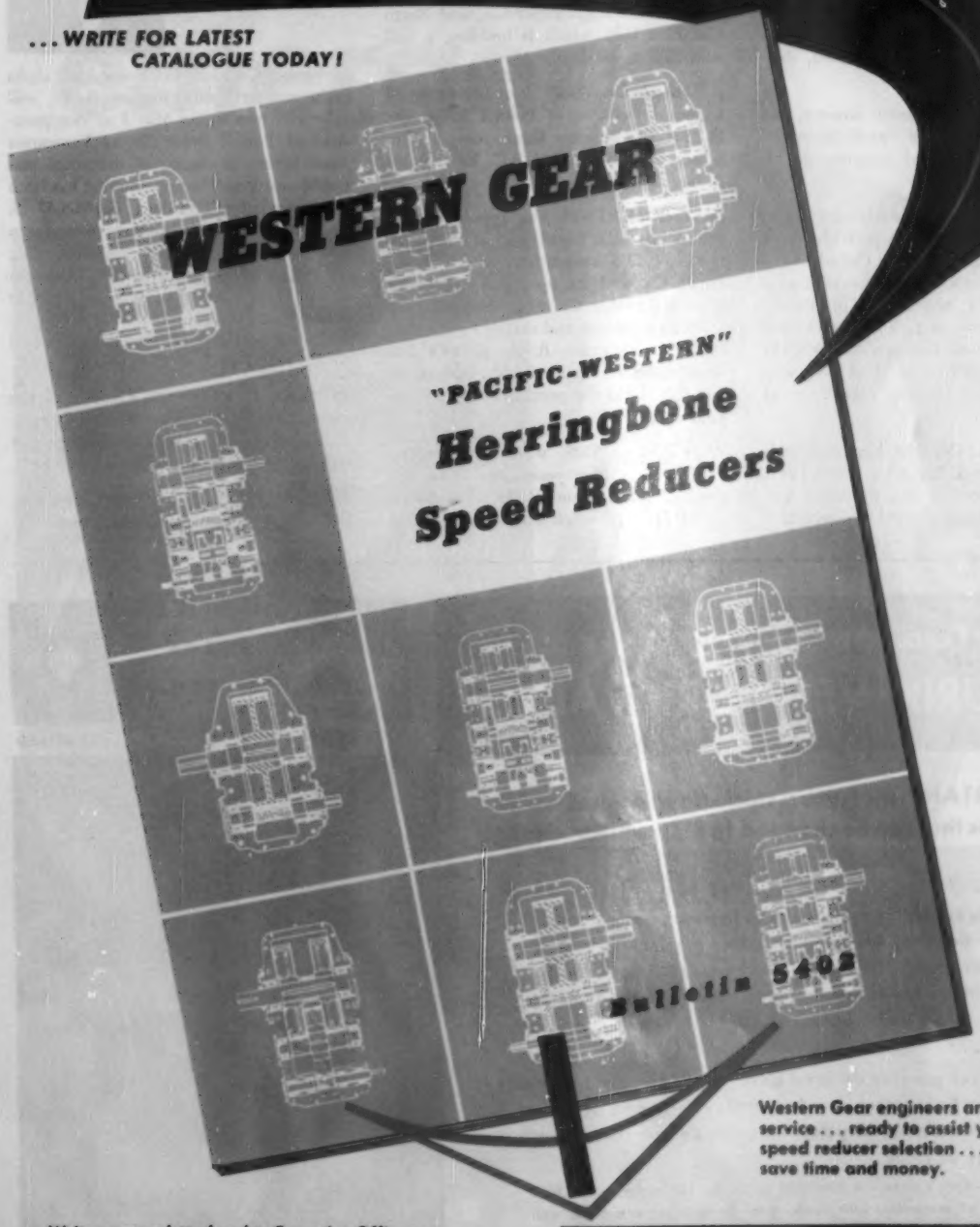
AAF herman nelson

American Air Filter
COMPANY, INC.

American Air Filter of Canada, Ltd., Montreal, P. Q. • 297 Central Avenue, Louisville 8, Kentucky

KEEP PACE *with new developments...*

...WRITE FOR LATEST CATALOGUE TODAY!



Western Gear engineers are at your service . . . ready to assist you on speed reducer selection . . . help you save time and money.

Write on your letterhead to Executive Offices, Western Gear Works, P.O. Box 182, Lynwood, California — Your copy will be mailed promptly.

5417

WESTERN GEAR WORKS

PACIFIC-WESTERN PRODUCTS | POWER TRANSMISSION GEARS • MACHINERY •

PACIFIC GEAR & TOOL WORKS · SOUTH WESTERN GEAR WORKS

Since 1888

PLANTS AT LYNWOOD, PASADENA, BELMONT, SAN FRANCISCO (CALIF.)
SEATTLE AND HOUSTON—REPRESENTATIVES IN PRINCIPAL CITIES

PULP & PAPER — PERSONALS — Continued

CANADIAN NOTES

ANDREAS CHRISTENSEN, production manager, Spruce Falls Power & Paper Co., Kapuskasing, Ont., spent Christmas with his wife at his old home town, Vancouver, B.C.

EDWARD BROOKS, senior director, and former vice-president of Powell River Co. British Columbia, died recently at St. Paul, Mnn., He was 70.

GORDON BROWN, formerly assistant to the president of Brown Corp., with offices in Montreal, has joined the Canadian International Paper Co. executive staff as a result of CIP's acquisition of Brown Corp.'s operations at LaTuque and elsewhere in Quebec. His brother, **WENTWORTH BROWN,** is head of Columbia Cellulose Co., Celanese subsidiary at Vancouver.

R. H. CHRISTIAN, who has been with Bathurst Power & Paper Co. since 1947, latterly as executive vice president and treasurer, has been elected a director.

JOHN HARVIE, former deputy minister of lands and forests in the Alberta government, has been appointed manager for North Western Pulp & Paper Co., subsidiary of St. Regis Paper Co., and North Canadian Oils, which is building a mill near Edson, Alta.

GEORGE DAWSON has been named technical assistant at Powell River Co. He left the industry three years ago to return to University of B.C. to take his B. Sc. degree.

R. A. ROBERTSON was appointed vice chairman of the board, and chairman of the executive committee of the Eddy Paper Co. and its operating subsidiary The E. B. Eddy Co. Mr. Robertson was formerly president and managing director of both companies. **R. A. IRWIN** has been appointed to succeed Mr. Robertson, but will retain the presidency of Somerville Ltd.

W. C. R. JONES, who went to the Pacific coast four years ago from the Beauharnois division of Howard Smith Paper Mills to become mill manager of

W. C. R. JONES becomes Vice Pres. of Powell River Co., in charge of industrial and public relations.

Columbia Cellulose Co.'s new high alpha pulp mill at Prince Rupert, B. C., will take over new duties May 1 as vice president of Powell River Co. at Vancouver head office, in charge of industrial and public relations. His appointment has been announced by President **HAROLD S. FOLEY.** Ray Jones went to Canada in 1929 to join CIP at Gatineau, later going to the Wayagamack division, Consolidated Paper Corp. In 1937 he went to Australia as assistant construction superintendent at the first chemical pulp mill to be established at Maryvale.

ROBERT P. KERNAN, founder of the Donnacona Paper Company, died recently in Montreal. Mr. Kernan was president of the company until his retirement in 1937.

JOHN MCMILLAN, of Powell River Co., has been appointed executive assistant.

ENGINEERED FOR THROTTLING SERVICES . . .

DeZURIK VEE-PORT VALVES

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ORIFICE SHAPE NEVER CHANGES!

THROTTLED

IT'S IMPORTANT that your stock-flow control valves have orifices that can be changed in SIZE without change in SHAPE!

The DeZURIK VEE-PORT VALVE has a distinct diamond-shaped orifice which can be increased or decreased in size as desired, but which retains precisely the same shape at all times. The rate of discharge remains constant at any setting. No place in these valves is there a spot where stock can build up and pack to interfere with uniform flow.

These valves provide decided advantages on refiner systems, pump discharge lines, stock-level control systems and other points where production and quality depend upon delivery of a steadfast, uniform volume of stock.

DeZurik Vee-Port Valves are available in 3" to 16" sizes, made in a broad range of materials, with lever, gear or cylinder operators, and also with positioners for automatic-control applications. Write for complete information.

DeZURIK SHOWER CO SARTELL, MINNESOTA

operation emergency!

On a recent Friday, a customer phoned us that one of their big board machines was operating without a spare bottom felt... and that in case of accident, the machine would be shut down.

Understanding the urgency of the situation, we gave the order our RED TAG SERVICE, and shipped the felt in 3 days... forestalling expensive down time. Normally, weeks are required to produce a large felt of this type.

While requests for such emergency service are not customary, this example clearly illustrates Huyck's manufacturing capacity and flexibility...helpful service which backs up our slogan..."FIRST IN SERVICE."

HUYCK FELTS
first in quality...
first in service

Here is what this customer wrote us:

"We want to acknowledge the excellent service you gave us on the 270 foot bottom felt for #2 machine. To say the least, this service was amazing. It isn't often that a manufacturer pitches in and does the service job that you people have done in this particular instance, and we wish to extend to you not only our compliments on your efficiency, but our sincere appreciation of the effort you made for us."

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Paper manufacturers from coast to coast are solving the condensation problem by using Truscon SPEED REX, famous protective and decorative coating for all metal, wood and concrete surfaces.

Because SPEED REX contains Devran, an Epoxy Resin, the new miracle ingredient, it resists *hard knocks* as well as moisture and chemicals. You paint less often when you standardize on SPEED REX because rough, tough physical abuse bounces off the rugged hide of this protective coating. Send coupon for full details on paper mill maintenance.

- Only one coat needed . . . in most cases.
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Please send me details about SPEED REX and paper mill maintenance without obligation.

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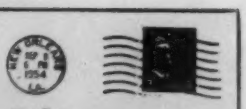


The Editor
PULP & PAPER
1791 Howard Street
Chicago 26, Illinois

Wanted—A Coating Process

We are interested in acquiring an installation for continuous coating of paper on both sides, to be between sections of dryers, on the paper machine itself, such as are used to make paper for magazine paper, illustrations, etc.

We are interested in companies which can license us to do this coating and companies which can supply us with such an installation, so that we can immediately ask for an import license.

FLORENTINO MONTFORT BATTU
Director General, Papelera Del Leizaran, S.A.
Andoain (Guipuzcoa) Spain. (Telegraph add.—"Palesa")

The Issue at Buenos Aires

Your report on the Pulp and Paper Meeting in Buenos Aires (Dec. issue) accurately reflects the tenor of the meeting and I was pleasantly surprised that you picked up the major issue that underlaid the extra curricula discussions . . . the issue of financing by public or private means.

E. W. TINKER
Executive Secretary, American Paper & Pulp Assn.

Coverage Excellent

The coverage of the Asheville Superintendents' meeting was excellent, and Speedy Jones and I appreciate all of the space given our meeting and the kind remarks about the success of the convention.

RUSSELL T. HUDSON
Asst. Paper Mill Supt., Union Bag & Paper Corp., Savannah.

(Mr. Hudson and Mr. Jones, of Geusta Paper Corp. were co-chairmen at Asheville).

"Remarkable Job"

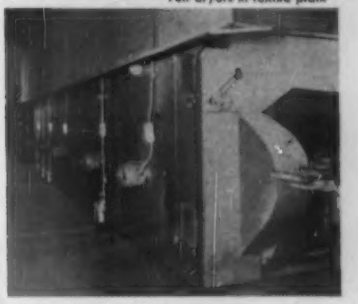
PULP & PAPER did a remarkable job of covering the Ketchikan Pulp Mill in your October issue.

Mr. . . . . (mfg. vice pres.) had the opportunity to visit this plant last fall, which made your report doubly interesting to him.

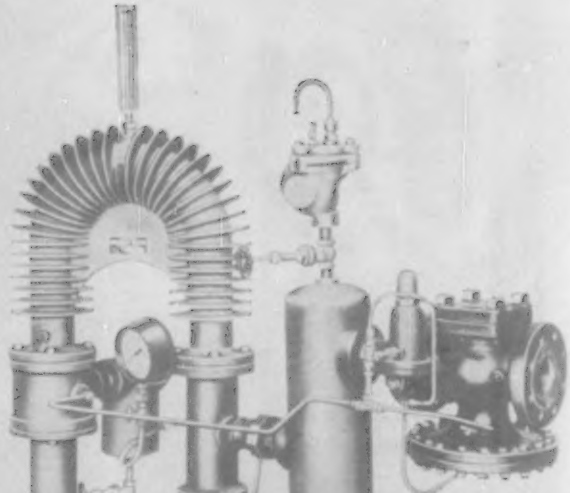
(Signed) Asst. To Mfg. Vice Pres.
A Middle West Mill.

Corrugator in paper board mill

Flatwork ironer in laundry



Felt dryers in textile plant



Production UP 30%
Steam costs DOWN 40%

You may not believe it . . . but we'll prove it!

When a prominent chemical manufacturer installed a Cochrane C-B System on a dryer for titanium dioxide, production went from 45 to 65 tons per day—*a gain of 30%*. Steam consumption decreased from 12,000 to 7,000 lbs./hr.—*reducing steam cost 40%!*

This example is not unusual. In process industries, paper board mills, laundries, or wherever steam is used for heat transfer, over 2000 Cochrane C-B Systems are setting new standards of production. Higher output, improved product quality, unbelievably improved equipment performance, longer service life, fuel savings, reduced maintenance . . . these are the benefits a Cochrane C-B System gives you. They all add up to increased production efficiency—a vital factor in insuring your share of today's competitive markets.

Unless your condensate drainage is handled by a C-B "Closed System", it is almost certain that your steam and heat transfer equipment is *not* operating at maximum efficiency. By draining condensate at jet speed, the C-B System assures faster, more uniform heat transfer in both old and new equipment and gives outstanding savings by discharging steam at higher temperatures directly to the boilers or the make-up facilities.

You may still be skeptical . . . but these are facts and *these results mean money in your pocket.* So, why not spend a few minutes to find out the complete story? Write us TODAY for Publication No. 6025 on C-B Condensate Drainage Control Systems.

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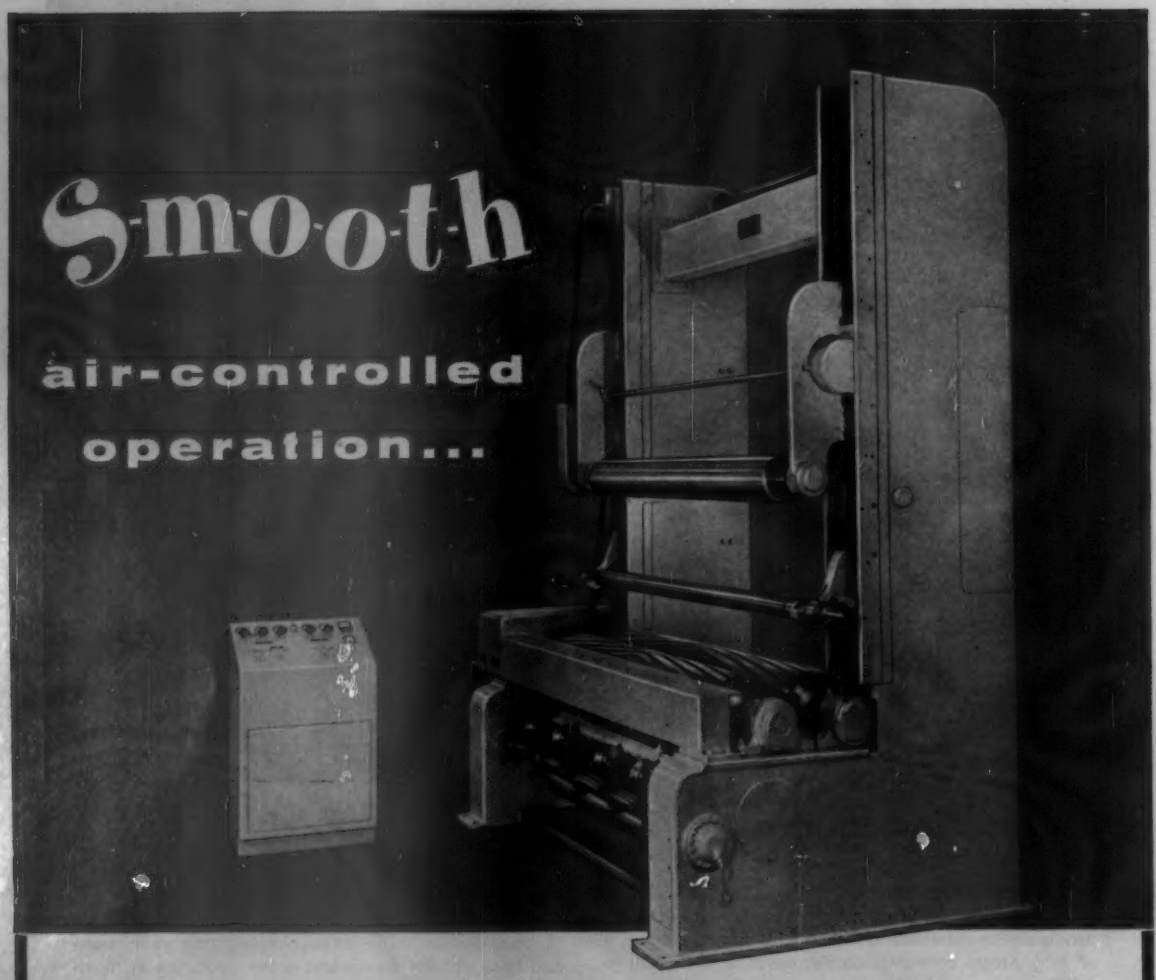

gives you perfect rolls every time!

THE MANCHESTER WINDER AND SLITTER is *completely air-controlled* to insure smooth operation with uniform tightness at proper tension over the entire roll diameter.

You'll get uniformly wound straight rolls, accurately slit with clean edges to meet today's exacting printing specifications—this at lower cost with fewer complaints and better customer acceptance.

The Manchester Winder and Slitter is simple and easy to operate from a single control station.

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Assembly bay of Manchester's large, modern, well equipped plant showing Winders in production.

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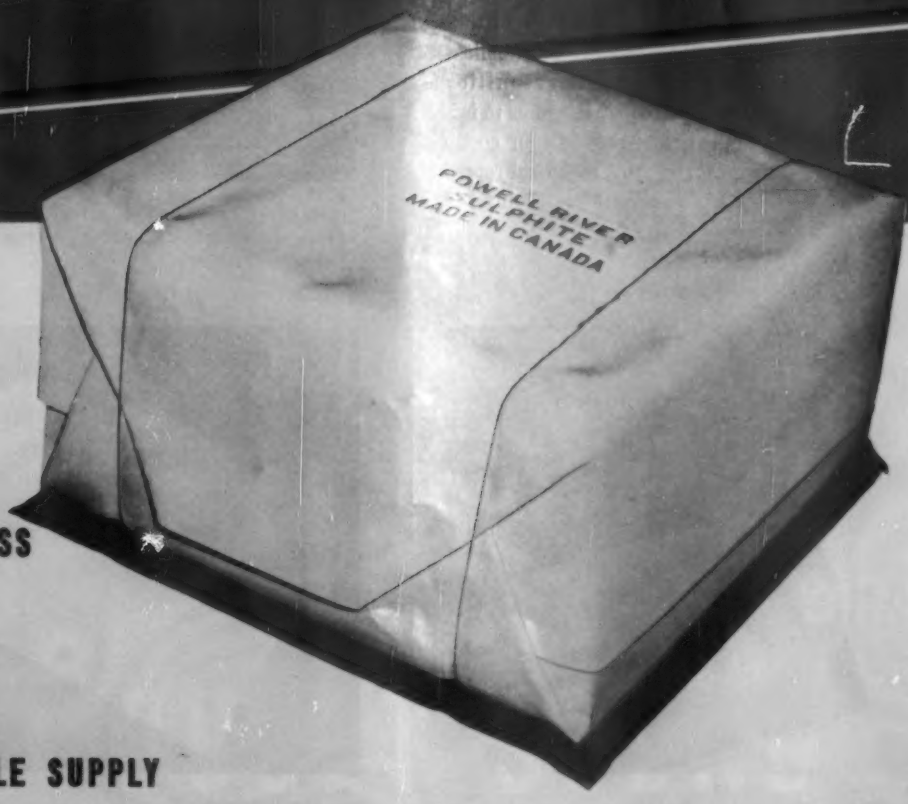

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More than a dozen types of Hercules Paracol® wax emulsions, each developed in Hercules laboratories to solve some specific type of sizing problem, are improving performance while effecting economies in size furnish for paper and board mills from coast-to-coast.

The wide range of Hercules Paracol wax emulsions and the diversity of their applications indicate the many opportunities Hercules papermaking chemicals offer to improve your products and reduce your costs. Contact your local Hercules technical representative or write directly to Hercules for descriptive literature.

LIQUID REPELLENCY—In surface sizings, the addition of small quantities of Paracol at the calender stack or size press improves liquid repellency and printability of paperboard.

TECHNICAL DATA—This descriptive booklet containing technical data on all types of Paracol can be obtained by writing Hercules for your copy.

IMPROVED QUALITY—One or more of the Paracol wax emulsions are used for fold properties of envelope papers, improving finish and creasing properties of many types of paper and board.

Paper Makers Chemical Department
HERCULES POWDER COMPANY
INCORPORATED
965 King Street, Wilmington 99, Delaware

PP54-9

PUGET PULP—the *whitest, cleanest, bleached sulphite pulp* that we can make is produced *particularly for the market.* To assure converting mills of top quality, Puget management is always testing new processes, always alert to improved methods, always ready to install new designs in equipment. *Gear your operations to* ***PUGET PULP.***

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More than a dozen types of Hercules Paracol® wax emulsions, each developed in Hercules laboratories to solve some specific type of sizing problem, are improving performance while effecting economies in size furnish for paper and board mills from coast-to-coast.

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Paper Makers Chemical Department
HERCULES POWDER COMPANY
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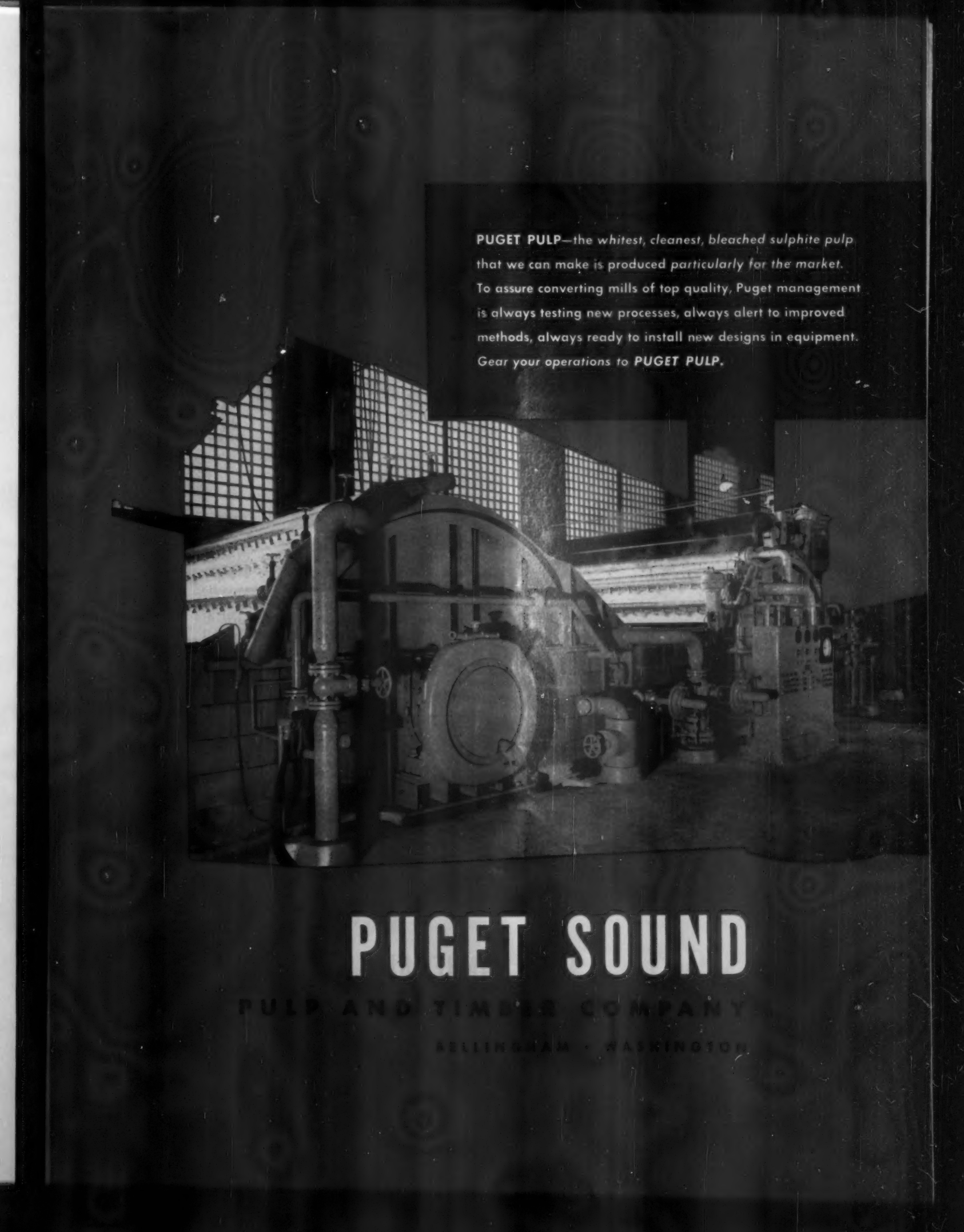
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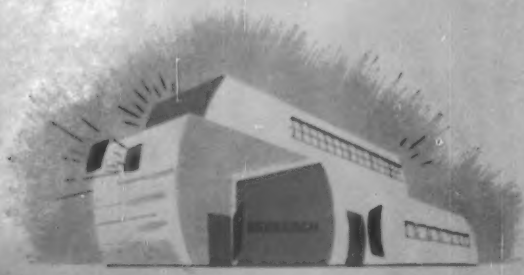
An interesting question, for sure. But not the kind of question we're concerned with. Due to the special nature of our work . . . CORN PRODUCTS RESEARCH . . . only those inquiries involving CORN'S uses can be placed on our agenda.



If you have a question like "How can we best apply this dextrine to our needs?" or "What can be done with starch to cut costs here or here?" or any other inquiry relating to the adaption of products from corn to your manufacturing process, contact us! All research and laboratory facilities of the Anheuser-Busch Corn Products Research Section will be placed at the disposal of your particular problem, without charge.

Why? . . . because Anheuser-Busch, Inc., is vitally concerned with the future research and development of corn derivatives and their application to daily life.

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and NOW *in* GRIFFIN

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Here in Griffin . . . in the heart of the expanding Industrial South . . . are complete facilities for every stage of manufacture, from raw rubber to finished roll, including the big rolls of today, and the bigger ones of tomorrow. Like Stowe-Woodward's Neenah Plant . . . opened less than 8 months ago . . . this new southern plant is part of a program planned to bring closer to the industries it serves, Stowe-Woodward's

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Craftsmen in rubber rolls

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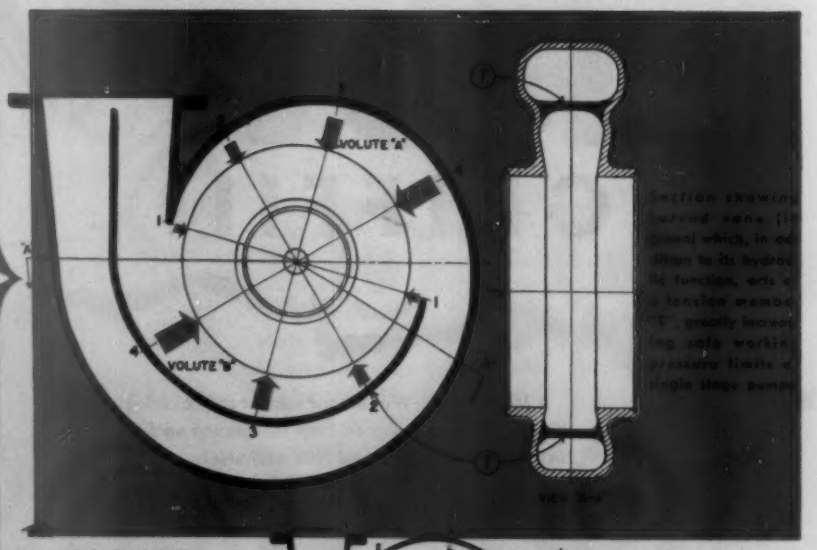
1. **"Double Volute"** permits use of special over-hung impellers for handling pumpage containing large volumes of *entrained* air.
2. **Extra case strength** resulting from tension member in **"Double Volute"** casing.
3. **No dilution.** Hydraulic Radial Balance resulting from "Double Volute" design permits shaft to rotate on true center reducing stuffingbox leakage to a minimum.
4. **Mechanical Seals.** Hydraulic Radial Balance permits mechanical seals to establish and maintain a uniform track between the contacting faces, thereby insuring long life and trouble-free service.
5. **"Double Volute"** construction eliminates "side push" of rotating element, reducing maintenance of rotating and stationary parts to a minimum.
6. **Unit type bearing** and rotating assembly is easily removable for inspection or repair without disturbing piping or driver.
7. **High operating efficiency.**

The Key to all these Benefits is the *Bingham* "Double Volute" Design



No "Side Push". Diagram of a "Double Volute" single discharge case of single-stage pump (above) showing the equal pressure on the opposite sides of impeller, insuring low maintenance.

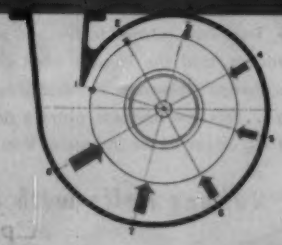


Diagram of "Single Volute" pump case (left) showing unequal pressure at opposite points around the periphery of the impeller. These unequal pressures cause "SIDE-PUSH" on the rotating elements, causing wear of rotating parts and, frequently, high maintenance.

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BINGHAM PUMPS TODAY ARE SERVING OVER 200 PULP AND PAPER MILLS

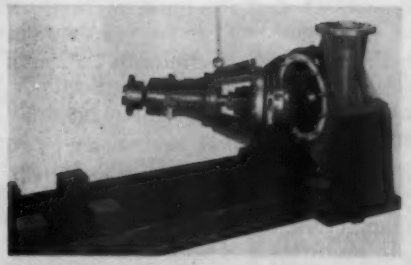
"DOUBLE VOLUTE" PUMPS ARE IN LEADING PULP and PAPER MILLS

There are more Bingham Digester Circulating Pumps now in use and on order than the total number of pumps of all other makes used for this service.

In leading pulp and paper mills today Bingham "Double Volute" Pumps are selected as *standard equipment* because of their consistent record over the years for continuous operation with minimum maintenance.

The CF Bingham pump illustrated below, for example, has established an enviable record for dependability and low maintenance in hundreds of pulp and paper mills — but no more so than a dozen other types of Bingham Pumps now serving the pulp and paper industry.

Bingham CF "Double Volute" Process Pumps mounted on floating base, used in digester circulating systems.



EASY ACCESSIBILITY
Bingham Type CF Process Pumps feature unit type bearings and rotating assembly which is easily removable for inspection or repair.

Bingham "Double Volute" Pumps will best serve your pulp and paper mill operations, as they are now serving leading pulp and paper mills everywhere. Write to your nearest Bingham office for "Double Volute" Bulletin, or send data on your pumping problem.

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"...without cost or obligation"

Another pulp bleaching problem solved. He's heading back to Syracuse . . . home and family . . . and maybe a stretch of regular hours in the lab.

Maybe, that is.

A SOLVAY Technical Service man's job can take him any place where there's a customer in need of assistance in handling or using SOLVAY products.

If he's in the Pulp and Paper Section, he may jump from a chlorine dioxide installation in Georgia to a pulp mill in Maine or Michigan that's having trouble. Yes, days and even nights "in the field" probing problems with the customer's technicians . . . and applying answers that the Pulp and Paper Section's years of specialized experience and endless research have uncovered.

Seems like quite a job ". . . without cost or obligation". But, SOLVAY has always felt that its responsibility as a manufacturer extends into the plants of its customers—to assure them of peak efficiency from the chemicals that set the standard for the industry.

SOLVAY can supply these not-ordinarily-available services because its Technical Service has separate sections for different industries.

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TRAMP METAL, BEWARE

The Emerson Magnetic Trap

The Emerson Magnetic Trap introduces a new idea for separating junk material from paper pulp and other liquid flow lines — particularly where conditions of high stock velocity and consistency exist. Combining the principle of the trap with that of magnetic separation, the removal of both magnetic and non-magnetic material is accomplished. You no longer need to fear the danger of tramp metal damaging expensive machinery or equipment.

Engineered for Efficiency — Stock is directed to the plates at right angles. As the square-inch area of the plates is over four times that of the pipe, stock remains over the plates more than four times longer — well within the flux pattern of the magnets — with no restriction to normal pipe line flow. A rush of stock from inlet to outlet is prevented by a baffle. Stock leaves the plates vertically — slowly — relieved of all junk material.

Greater Magnetic Power — Emerson Heavy Duty Magnetic Plates — carrying a 10-year pulling power guarantee — were specially designed for this unit. Magnets are cast of the new super strength Hyflux Alnico V with 22% more magnetic strength — completely enclosed in stainless steel non-magnetic housing.

Easy to Clean — One complete turn of the nuts frees the gibs and the hinged doors are free to open. Plates can be cleaned inside the housing or removed.

Easy to Install — Emerson Magnetic Traps are equipped with Standard Class 125 C.I. pipe flanges for connection on 8", 10", 12" or 16" pipe lines.

Send for Catalog 1044-M for information on:

Emerson Magnetic Traps — for difficult conditions of separation.

Emerson Magnetic Separators — for moderate conditions of separation — stocked in 6", 8", 10", 12" and 14" pipe sizes.

Emerson Magnetic Plates — for separate installations in troughs, pipes, chutes, flow boxes, head boxes, etc.

The Emerson Manufacturing Co.

Division of John W. BOLTON & Sons, Inc.

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Keyed...to your cost problems

One key that solves production and cost problems...that improves mill efficiency...is a fresh viewpoint, a new idea.

There's where the specialized services of your Chain Belt Field Sales Engineer can help you. His broad application knowledge...his familiarity with your problems...and the efficient performance of Chain Belt lumber mill products can help you find the right key to your problems.

for example: If premature wear and failure of chain conveyors is your problem, Rex Z-Metal Chains can assure the right "key" to longer, lower cost service. Rex Z-Metal provides the far longer life, the extra resistance to abrasive sliding wear needed for lumber mill service.

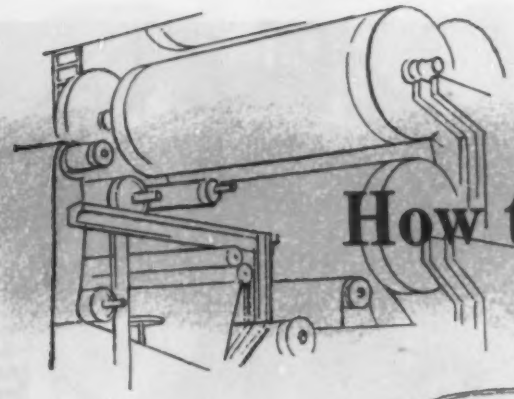
for example: If you want increased capacity for your wood chip belt conveyors, Rex Wood Chip Idlers are your answer. Because the concentrating rolls are sloped at a 45° angle instead of 20°, you load chips close to the belt edge without spillage . . . considerably increase capacity.

for example: If you want to reduce refuse-handling costs, Rex Combination Mill Type Chains provide an efficient answer. Made up of steel sidebars alternating with cast block links, it is far stronger, lasts longer . . . stands up under heavier, tougher service than similar all-cast type chains.

Whatever your needs...conveyor chains, drive chains, belt conveyors, feeders, elevators, sprockets, buckets or roller bearings, you'll find the right "key" to your cost problems in the complete Chain Belt line. See your local Field Sales Engineer, or write CHAIN Belt Company, 4691 West Greenfield Avenue, Milwaukee 1, Wisconsin.

CHAIN BELT COMPANY

District Sales Offices and Distributors in all principal cities



How this Paper Mill

made *ONE* drum of defoamer

do the work of *TWO*

The efforts of the Nopco technical service men do not always stop with supplying effective defoamers at competitive prices. Very often their wide experience with all types of pulp and paper mills can suggest money-saving ways of using these defoamers.

☆ ☆ ☆

In one well known mill, for instance, the Nopco technical man was able to bring about important savings with his practical suggestions for improving both the handling and distributing of the defoamer to the points of use.

The result: at the year's end this mill found they had cut their defoamer consumption exactly in half, at a clear saving of $6000 a year!

Nopco, pioneer in paper chemicals, knows well that paper and pulp mills vary so widely in their operating conditions that no one defoamer will work equally well for all. By proper selection from our Nopco KF* Series of paste defoamers, or our Nopco LD* Series of liquid defoamers, we are confident there is one defoamer which will produce foam-free paper at high speeds for *your* mill. Why not give the Nopco paper specialist the chance to study your operation carefully and make recommendations? His experience may quite possibly show you an extra saving like the one cited here.

Nopco Chemical Co., 316 Water St., Harrison, N. J.

*Reg. U.S. Pat. Off.

NOPCO

PLANTS: Harrison, N. J. • Cedartown, Ga. • Richmond, Calif.

Mathieson Ammonia: *balance means dependability*

As ammonia production climbs to meet growing agricultural and industrial requirements, *dependability* is more important than *availability*. At Mathieson this dependability is achieved through balance and flexibility. Three plants—Lake Charles, La., Morgantown, W. Va., Niagara Falls, N. Y.—provide both commercial and refrigeration grades in key consuming areas. A favorable balance between agricultural and industrial outlets minimizes peak-demand seasonal shortages.

Consider, too, Mathieson's balance and flexibility in the production of other basic industrial chemicals. 6 caustic soda plants, 5 chlorine plants, 7 sulphuric acid plants, 3 major alkali plants, give customers the dependability they want. In addition, Mathieson offers practical technical service in ammonia pulping and aqua preparation, as well as assistance in the application and handling of ammonia and other Mathieson basic chemicals.

Call on Mathieson when planning current or future chemical requirements. Perhaps you can buy to better advantage from one of America's largest producers of basic industrial chemicals.

MATHIESON CHEMICALS
OLIN MATHIESON CHEMICAL CORPORATION
INDUSTRIAL CHEMICALS DIVISION · BALTIMORE 3, MD.

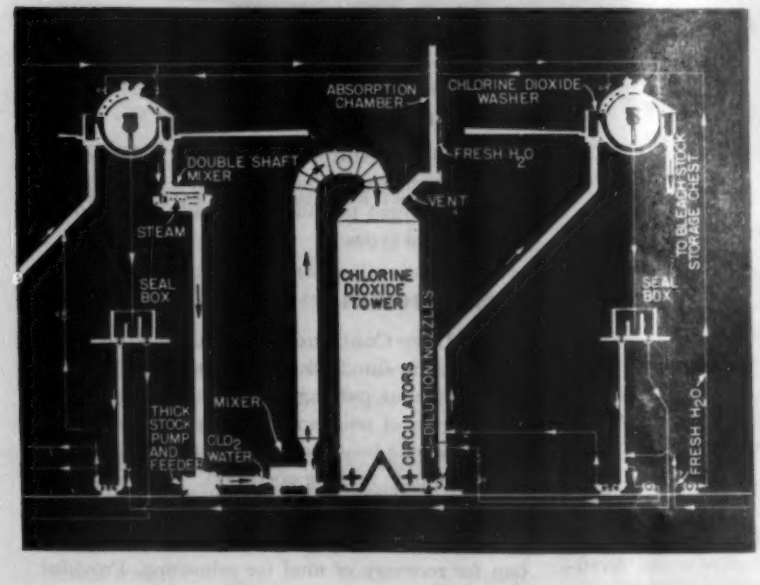
MATHIESON

CAUSTIC SODA · SODA ASH · CHLORINE · SULPHURIC ACID · SULPHUR · AMMONIA · NITRATE OF SODA · BICARBONATE OF SODA · CARBON DIOXIDE · SODIUM CHLORITE · CALCIUM HYPOCHLORITE
ETHYLENE OXIDE · ETHYLENE GLYCOL · DIETHYLENE GLYCOL · TRIETHYLENE GLYCOL · POLYGLYCOLS · DICHLOROETHYLETHER · ETHYLENE DICHLORIDE · METHANOL · SODIUM METHYLATE · ETHYLENE DIAMINE

90 G.E. BRIGHTNESS

with

IMPCO CHLORINE DIOXIDE BLEACHING SYSTEM



PLUS

- Highest Brightness
- Excellent Pulp Quality
- No Strength Loss
- Low Chemical Costs
- Reduced Pulp Shrinkage
- Lower Solids to Sewer
- Fits Any Existing System

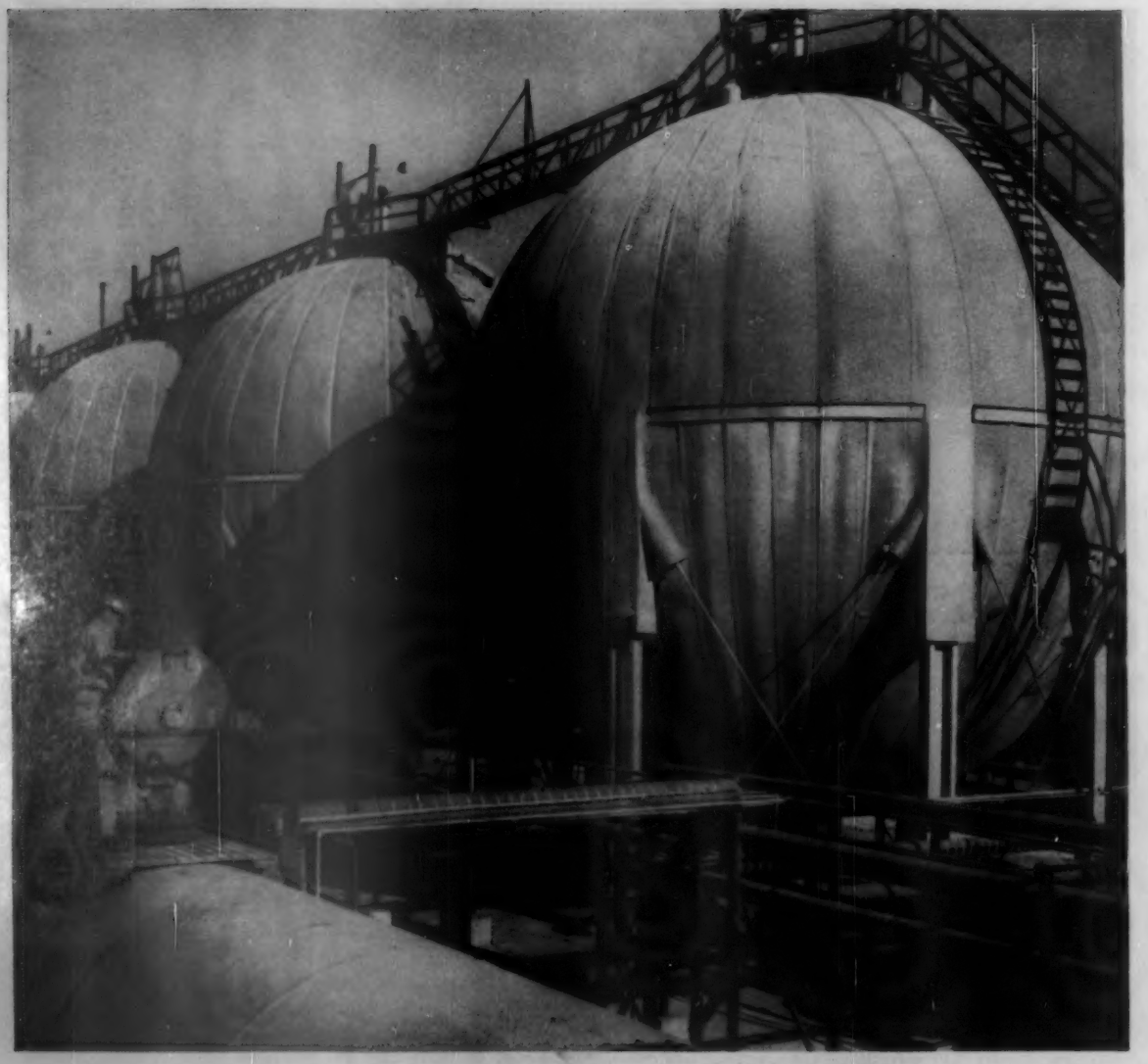
With the advent of chlorine dioxide bleaching in the United States, IMPCO studied the problem carefully and tailored the first working high density system. This pioneering unit was installed in a prominent mid-southern kraft mill with outstanding results. Since that time IMPCO systems have gone into operation on soda, sulphite and semi-chemical pulp. This continuous high density process has produced successful results from the very beginning and today 22 IMPCO systems are bleaching over 6000 daily tons of high brightness quality pulps. We welcome the opportunity to work with you.

IMPCO

IMPROVED MACHINERY INC.

NASHUA, NEW HAMPSHIRE

Sherbrooke Machineries Limited manufacture similar equipment in Canada



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90 G.E. BRIGHTNESS

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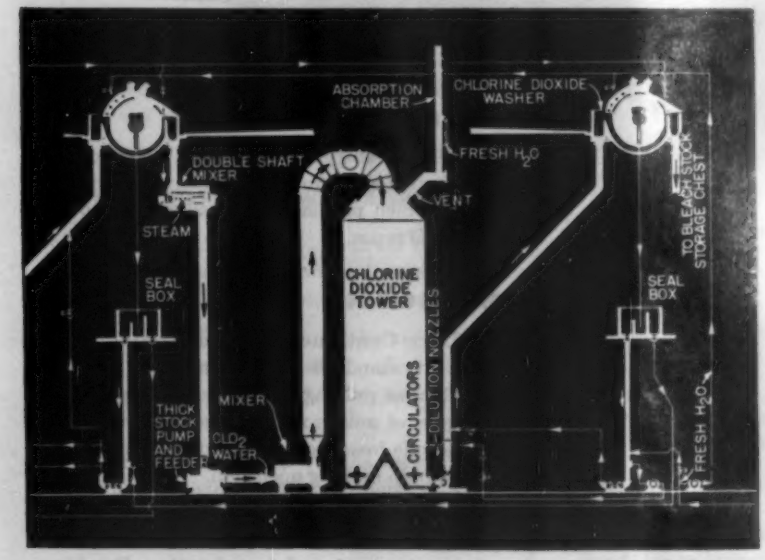

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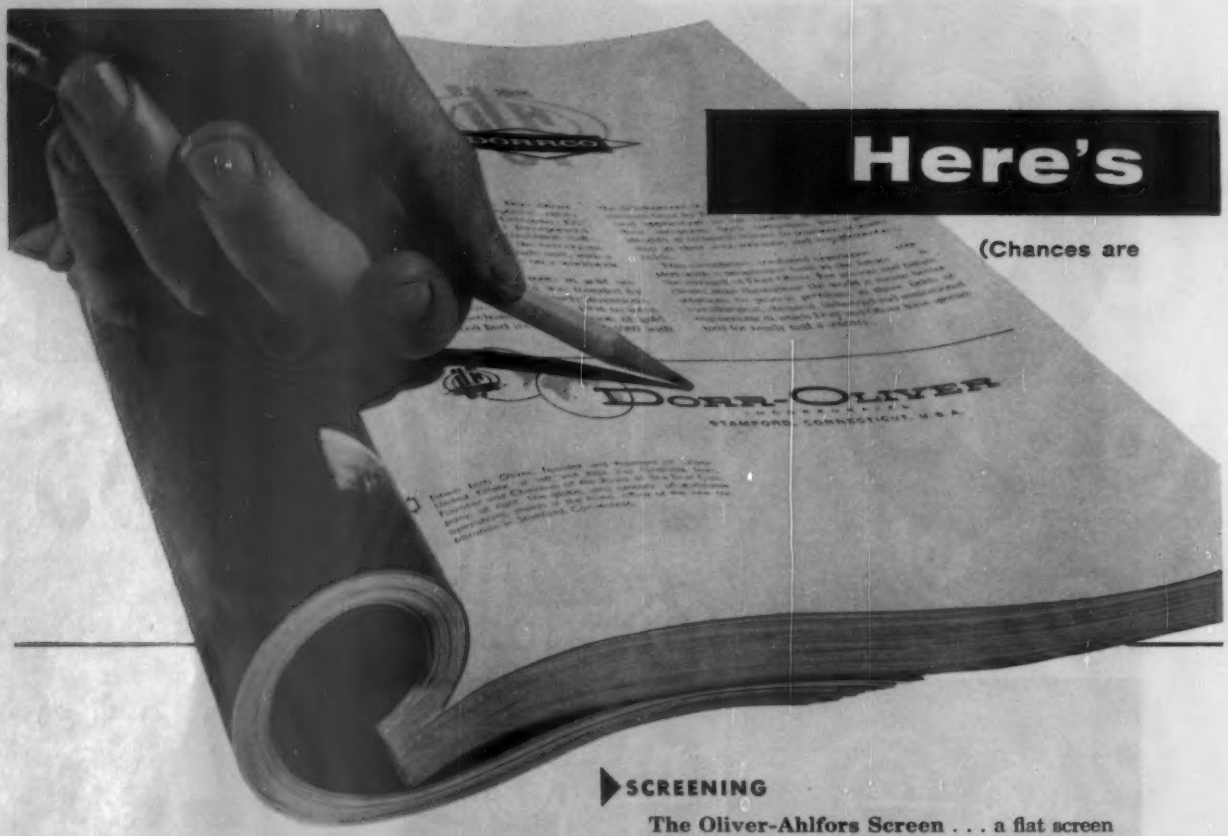


DECKERING & THICKENING

The Oliver Decker . . . a dependable, high-capacity unit available in Ringvalve design, internal leg, and pipe type design . . . can be constructed of materials to meet practically any corrosion problem.

The Oliver High-Density Thickener . . . for the production of a uniform consistency sheet with a high pulp density.

Oliver Decker-Saveall . . . a combination unit that simultaneously thickens screened pulp and recovers stock from waste white water. Available in Ringvalve and pipe type construction.

WASHING

The Oliver Bleach Washer . . . a high efficiency washing filter which can be supplied in either stainless steel, steel or rubber covered construction depending upon corrosion conditions. Available in both Ringvalve and pipe type designs.

The Oliver Brown Stock Washer . . . for maximum recovery of black liquor at high concentration, minimizing weak liquor losses, and production of clean pulp.

SCREENING

The Oliver-Ahlfors Screen . . . a flat screen operating on the "upflow" principle, a significant departure which provides many advantages over conventional types.

RECAUSTICIZING

The Dorr Continuous Recausticizing System . . . the standard chemical recovery process for the alkaline pulping industry. Delivers a clear white liquor of uniform causticity to the digester . . . holds soda losses to a minimum and improves the entire pulp making operation.

The Oliver Lime Mud Filter . . . the standard unit in the Dorr Continuous Recausticizing System for recovery of mud for reburning. Provides high capacity, low maintenance, almost perfect separation of solids from liquids, and thorough washing of the solids.

The Dorrco White Liquor Polishing Station . . . can be incorporated into new and existing recausticizing systems. Particularly important to producers of bleached and dissolving pulps.

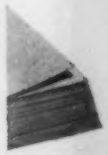
SHEET & BOARD FORMING

The Oliver Boardformer . . . for continuous formation of uniform caliper insulation and/or hardboard.

Our New Name

you saw it in this ad last month)

and Here's the Complete Line of Dorr-Oliver Equipment for the Pulp and Paper Industry



The Oliver Sheetformer . . . produces a continuous, uniform sheet suitable for either pulp drying or wet machine operation.

FIBRE RECOVERY & WASTE TREATMENT

The Oliver Saveall . . . a drum type vacuum filter to meet practically any mill condition. Handles wet breaks as well as white water without separate system.

The American* Saveall . . . ideal where large filtering area is indicated. Disc type design requires a minimum of floor space.

Dorr Clarifiers and Thickeners . . . a complete line of sedimentation equipment to provide primary treatment (suspended solids removal and BOD reduction) to general mill effluents, deinking waste water, etc.

The Currie Claraetor* . . . a combination unit providing clarification and aeration in a single unit. Provides complete treatment for mill effluents by the activated sludge process.

WATER TREATMENT

The Dorrco Aldrich PeriFilter System . . . combines pretreatment and rapid sand filtration in a single unit with two or more units normally installed in parallel. Also a complete line of conventional and high-rate equipment units to solve any pulp mill water supply problem.

The Dorrco Hydro-Softener . . . a new unit which softens water supplies continuously using base exchange resins.

SO_2 PRODUCTION

The Dorrco FluoSolids* System . . . a radical departure from conventional roasters which produces a high-strength SO_2 gas for cooking liquor from pyrite, pyrrhotite and other sulfur bearing ores.

FOR FURTHER INFORMATION . . . The foregoing serves only to highlight the scope of Dorr-Oliver. We'll be glad to send you literature providing detailed information on our world-wide equipment and services for the pulp and paper industry. Dorr-Oliver Incorporated, Stamford, Connecticut.

*Trademark Reg. U. S. Pat. Off.

DORR-OLIVER
INCORPORATED
WORLD-WIDE RESEARCH · ENGINEERING · EQUIPMENT
STAMFORD · CONNECTICUT · U.S.A.

New CRANE Corrosion-Resistant Valves in 18-8 SMo and Craneloy 20

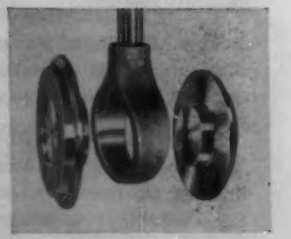
Gate, Globe and Angle Patterns

Few valves for process industries have ever received the quality treatment given this new Crane line.

Note, for instance, the unique yet simple split-wedge disc construction in the gate valves. Those dual identical discs are free to rotate in their holder—the most effective design for resisting galling. The trunnion shape at the back of each disc assures even distribution of closing forces. You couldn't buckle them if you tried.

The globe and angle valves give equally outstanding control of corrosive fluids. A new type disc-stem connection, with minimum clearances, practically eliminates vibration. By placing seating load closer to seats, it provides easier, more accurate closure.

Throughout, these valves are built for better service in your choice of Crane 18-8 SMo Stainless Steel or Craneloy 20. Both lines come with screwed or flanged ends. Full information given in circular AD 2059—available from your Crane Representative or on request to address below.



New split-wedge disc in gate valves combines the benefits of free rotation with uniform seat load pressure.

CRANE CO.

General Offices: 836 S. Michigan Ave., Chicago 5, Illinois
Branches and Wholesalers Serving All Industrial Areas

VALVES • FITTINGS • PIPE • PLUMBING • HEATING

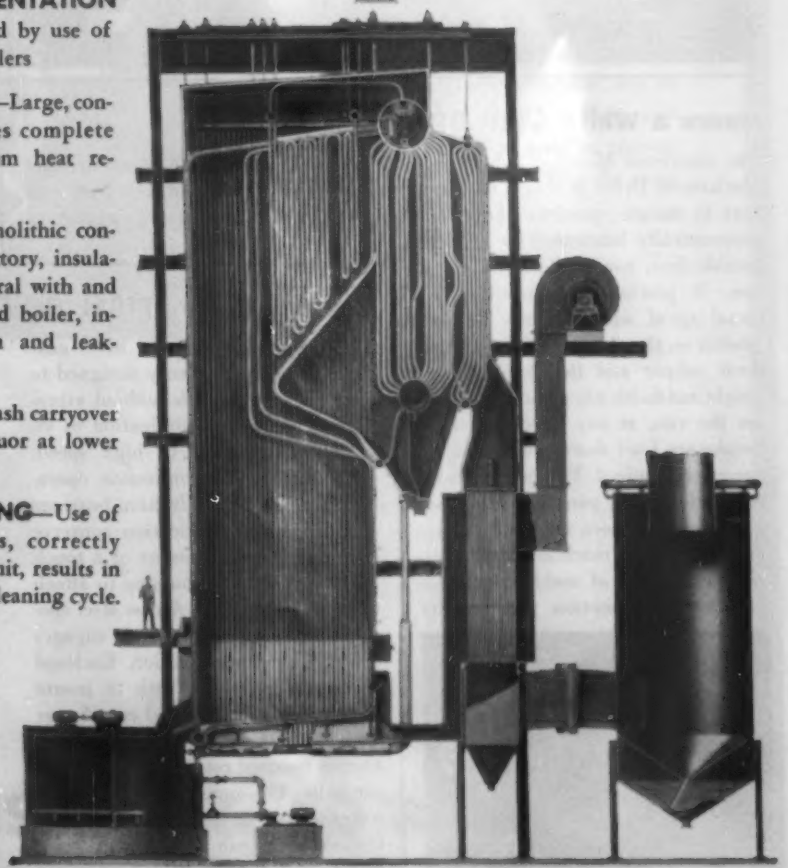
CRANE'S FIRST CENTURY . . . 1855-1955

Improved Design Features of B&W Recovery Unit assure . . .

MAXIMUM EFFICIENCY

in Chemical and Heat Recovery

- **COMPLETE INSTRUMENTATION**—Combustion is stabilized by use of automatic air-flow controllers
- **LOW FURNACE DUTY**—Large, conservative furnace assures complete combustion and maximum heat recovery
- **TIGHT SETTING**—Monolithic construction, in which refractory, insulation and casing are integral with and supported on furnace and boiler, insures uniform expansion and leak-proof setting
- **CLEAN BOILER**—Low ash carryover is the result of firing liquor at lower per cent solids
- **NO ROUTINE LANCING**—Use of improved soot blowers, correctly located in the recovery unit, results in a thorough and efficient cleaning cycle.



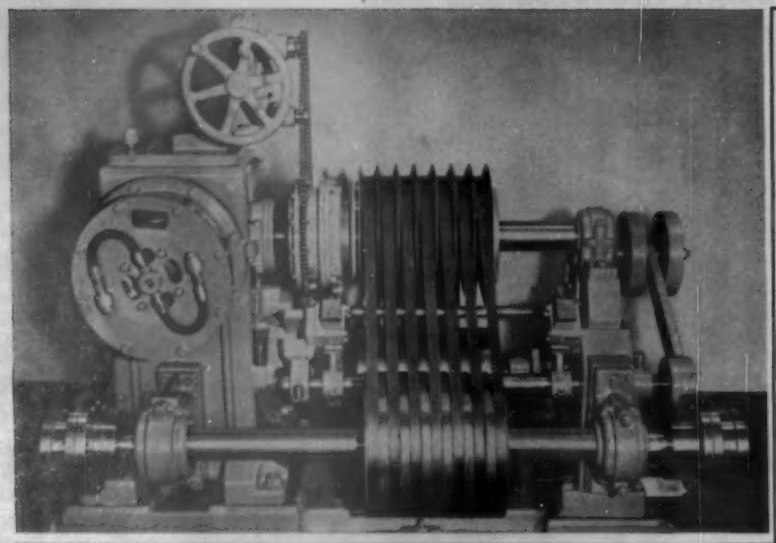
Typical modern B&W Two-Drum Recovery Unit equipped with B&W Cyclone Evaporator.

BABCOCK & WILCOX

THE BABCOCK & WILCOX COMPANY
161 East 42nd Street
New York 17, N. Y.

P-780

MOORE & WHITE DRIVES for every purpose



Moore & White SYCO DRIVE

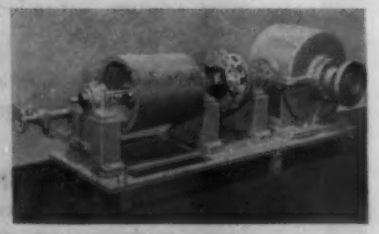
The improved Moore & White Syco Mechanical Drive is simple and compact in design—precision built, and automatically lubricated for efficient, trouble-free, round-the-clock operation. It precisely synchronizes sectional speed and preserves uniform tension on the sheet at all times. Uniform caliper and the desired basic weight and finish are assured throughout the run, at any selected setting. Breaks are few; down-time and wastage are minimized. You get increased production from your present paper machines — a more uniform, quality sheet at lower machine cost. Syco saves up to 50% of usable floor space — power consumption is decidedly lower. You'll find that maintenance costs are sharply reduced . . . that Syco is *safe* for machine operators.

Moore & White VERSI-DRIVE*

This unique M&W drive is completely modern and offers you many important, exclusive features. It is engineered for maximum efficiency, compactness, economy of space, and accessibility. Versi-Drive is versatile, reliable, and instantly controlled . . . includes every possible safety factor for workmen. It is precision built to exacting Moore & White standards for dependable, trouble-free operation. Stoppages and down-time, which take such a toll of tonnage, are eliminated. It is designed to keep installation, operation and maintenance costs low. Highly adaptable Moore & White Versi-Drive is available in three sizes, in practically all speed ranges. Among the many operating advantages are positive power transmission, with precision draw control to the driven machine section.

Moore & White SPIRAL BEVEL GEAR DRIVE

This enclosed type spiral bevel gear drive has been expressly designed to meet paper mill needs without vibration or noise. The elimination of vibration is essential to high speed, good quality, and continuous operation. Latest type antifriction bearings and dependable lubrication conserve power. The drive consists of a touch shaft with suitable coupling to attach to the machine unit. A cast steel special bevel gear on the shaft engages a forged steel bevel pinion. Enclosed gears run in an oil bath to insure proper lubrication. Spiral cut of gear teeth entirely eliminates backlash and assures constant rotation to the different units. The cone pulley which receives the power from the cone on the line shaft is built with a wide face and a shallow taper to permit more accurate regulation of the draws and



lengthen the life of the belt. This efficient, power-saving drive costs little to maintain, and will increase your production.

Write us today for full information concerning any of these modern Moore & White drives, and for engineering aid. We'll be happy to help you solve any of your paper-making problems without obligation on your part.

*T.M. Reg. U.S. Pat. Off.

The MOORE & WHITE Company 15TH STREET AND LEHIGH AVENUE • PHILADELPHIA 32, PA.

CUSTOM-BUILT MACHINES FOR MAKERS OF PAPER AND PAPERBOARD

In the New England states, Moore & White is represented by Orton Corp., Fitchburg, Mass.

Established 1886

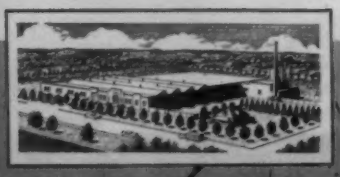
WOOD PULP

"What endless, active life is here!"
MATTHEW ARNOLD

An industry's vitality springs from imagination and enterprise—in the research laboratory, on the production line, and in the market. That is why the Pulp and Paper Industry, never content to rest on present achievement, ranks with the most vital anywhere.

GOTTESMAN & COMPANY
— INCORPORATED —
100 PARK AVENUE • NEW YORK 17, N. Y.
EUROPEAN OFFICES: Birger Jarlsgatan 8, Stockholm, Sweden

Asten DRYER FELTS



VALLEYFIELD
QUEBEC

Expansion

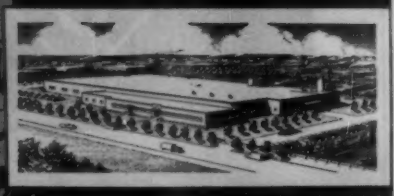
of service to the paper industry

To meet the needs of our customers, the manufacture of ASTEN Dryer Felts in the United States will soon be augmented by a second plant located at Walterboro, South Carolina.

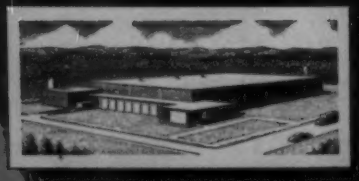
Besides speedier delivery to mills in the South, these new facilities will provide added assurance of emergency supply to ASTEN users everywhere. This modern plant will be in early operation.

Economy in the long run

PHILADELPHIA
PENNA.



WALTERBORO
SOUTH CAROLINA



ASTEN-HILL MFG. CO. PHILADELPHIA, PENNA.
WALTERBORO, S. C.

ASTEN-HILL LIMITED VALLEYFIELD, QUEBEC

More Facts On U.S. Foreign Mills Aid

Over $40,000,000 went to Austria in interest bearing "counterpart" funds for pulp and paper plants

• Just a year ago—at Paper Week—U.S. industry leaders told PULP & PAPER they had been unable to get figures on U.S. aid to foreign mills in Europe and Asia. Since then this magazine has made efforts through various channels to get this information.

• Especially prepared for PULP & PAPER readers is this heretofore unpublished report of United States financial aid to overseas nations in the period from Apr. 3, 1948 to June 30, 1954 for building pulp and paper mills, expanding existing mills, and for the purchase of pulp and paper for those countries.

This financial aid was given through these successive agencies—Economic Cooperation Administration, Mutual Security Administration and the present Foreign Operations Administration under Harold Stassen.

OVER $40,000,000 FOR AUSTRIA MILLS—The largest figure for any country is the $40,500,000 to Austria as "counterpart funds approved for withdrawal for production of pulp and paper."

Over $86,000,000 was spent in Britain for pulp and paper products. Under this heading, the totals in France and West Germany each exceeded $15,000,000 for period of over 6 years.

PULP & PAPER, as its readers are aware, has been trying for many months to get this information.

At Paper Week a year ago, PULP & PAPER was told by a high industry executive that he had been unable to get FOA financial figures, and the best guess of the industry leadership at that time was that $20,000,000 had gone into Austria alone. Austria now is an important seller in the world pulp market, competing with North American mills.

EXPLANATION OF HEADINGS—Last month PULP & PAPER, through Sen. Mansfield of Montana was able to publish figures for the 1954 fiscal year only. The tables published with this article include that period and more than 5 preceding years.

This is how Sen. Mansfield explains the nomenclature used in the FOA headings on these tables, and the rules as they apply now to FOA only:

"There have been no (FOA) gifts to individuals or companies for building mills or purchasing pulp or paper. There have been procurement authorizations which make available foreign exchange to cooperating countries for purchase of commodities and equipment. To obtain this, they must pay the equivalent in their local currency.

"Table I shows obligations and expenditures by countries. Table II shows statistics on industrial projects financed in part (by FOA only).

"The local currencies put up by recipients goes into so-called counterpart funds in each country. Ten percent of these funds accrue to the account of the U.S. The balance, or 90%, belongs to the government of the cooperating country and is kept in a separate fund jointly administered by the cooperating country and FOA. These funds finance programs on a loan basis. Interest bearing counterpart funds for promoting production of pulp and paper are shown in Table III."

TABLE I

ECA/MSA/FOA FINANCED PULP AND PAPER PRODUCTS

Cumulative Apr. 3, 1948-June 30, 1954

Country of Destination	*Cumulative April 3, 1948—June 30, 1954 Obligations*	*Expenditures*
Europe	*$134,545,000*	*$132,492,000*
Austria	$ 377,000	$ 377,000
Belgium-Luxembourg	2,566,000	2,566,000
France	15,896,000	15,706,000
Germany (Fed. Rep.)	17,056,000	16,752,000
Iceland	718,000	673,000
Ireland	4,938,000	4,938,000
Italy	1,867,000	1,867,000
Netherlands	962,000	962,000
Spain	6,000	—
Trieste	30,000	30,000
United Kingdom	88,081,000	86,574,000
Yugoslavia	2,047,000	2,047,000
Far East	*$ 7,149,000*	*$ 4,267,000*
Burma	17,000	143,000
China (Formosa)	3,754,000	2,048,000
Indochina, Associated States	252,000	238,000
Indonesian Republic	2,000	—
Korean Relief and Rehabilitation	1,189,000	82,000
Philppines	1,741,000	1,738,000
Thailand	41,000	19,000
Old Korea	119,000	119,000
Greece	3,389,000	1,544,000
Turkey	37,000	16,000

TABLE II

PULP AND PAPER—INDUSTRIAL PROJECTS FINANCED IN PART BY FOA

Cumulative Apr. 3, 1948-June 30, 1954

European Program	*FOA Procurement Authorized*	*FOA Paid Shipments*
Austria	$3,278,000	$3,278,000
Italy	1,371,000	1,440,000*
Portugal	4,338,000	4,335,000
TOTAL	$8,987,000	$9,053,000

* Temporary overpayment pending adjustment.

Far East Program	*Cumulative Fiscal 1951-June 30, 1954*	
	Obligated	*Expended*
Formosa	3,470,000	98,000

TABLE III

COUNTERPART FUNDS APPROVED FOR WITHDRAWAL FOR PRODUCTION OF PULP AND PAPER

(Dollar equivalents of local currency in millions of dollars)

	Cumulative April 3, 1948-June 30, 1954	*Fiscal Year 1954 as of June 30, 1954*
TOTAL	*$54,500,000*	*$4,100,000*
Austria	$40,500,000	$3,500,000
Denmark	$ 1,000,000	—
France	$ 2,900,000	—
Germany (Fed. Rep.)	$10,100,000	$ 600,000
China (Formosa)	$ 600,000*	$ 600,000

* January 1, 1949-June 30, 1954.

PULP & PAPER

What's Going On in the Market Pulp World

Acontecimientos En Los Mercados Mundiales

EDITORS NOTE—Worldwide commerce in woodpulp is setting new patterns as well as new records. Woodpulp has become a billion dollar commodity in world trade.

As a service to many overseas subscribers to PULP & PAPER, we are now publishing our world pulp news in both Spanish and English on these pages. Hundreds of our overseas readers are especially interested in this news—for business reasons, as purchasers and users of market pulps, and for other reasons. The great majority, we know, read either English or Spanish with facility.

Hoy día en el comercio mundial de pulpa se estan realizando grandes cambios, al mismo tiempo que dicho comercio aumenta notablemente. El valor de la pulpa como articulo de comercio mundial ya asciende a mas de 1.000.000.000 dls.

Con el anhelo de mejor servir a nuestros muchos lectores, de ahora en adelante publicaremos nuestras noticias mundiales en espanol e inglés. Cientos de nuestros lectores, siendo compradores o consumidores de pulpa, o por otras razones, tienen particular interés en dichas novedades. La mayor parte de ellos leen con facilidad o el espanol o el inglés, y asi con publicar las nuevas en ambos idiomas esperamos servirlos con mayor provecho.

PACIFIC COAST EXPANSION—Expansion on the North Pacific Coast in pulp grades is continuing, despite new converting mills which are going in, using pulp formerly shipped elsewhere.

In February, the U.S. Forest Service is expected to auction off long term rights to 13,900,000,000 ft. of timber in the Juneau, Alaska, region to Georgia Pacific Plywood Co., a big timber owner in Oregon also. No other bidder is expected. Although a 500-ton newsprint is discussed, market pulp also might be made at Juneau.

Next MacMillan-Bloedel expansion, probably a kraft pulp mill, is expected at its Port Alberni, B.C., site. Much talk continues in the Pacific Northwest concerning possible combines of big sawmill-timber owners, like Pope & Talbot, combining with pulp or paper interests.

Douglas fir sawmill left-over wood is still a potentially almost fabulous source of supply for future pulp mills in the Pacific Northwest. Alder is being increasingly used by several companies.

MORE U. S. PULP EXPORTED—United States exports of woodpulp continue to climb. In November last the shipments hit 40,000 tons, well above the 34,000-ton monthly average for the year up to that month. This compares with an average of 13,500 tons per month in 1953.

There is increasing demand in Europe for both Scandinavian and North American pulps, which has been a contributory factor to the first quarter increase in prices of Swedish pulps shipped to U.S. Sverker Kastrup, director of Swedish Cellulose Co., estimates Europe had 1,300,000 tons more of woodpulp at its disposal in 1954, excluding fluctuations of stocks. Europe's own surplus production was 900,000 tons, one of highest amounts in many years.

U.S. MARKET MORE COMPETITIVE—The U.S. market for woodpulp is now more competitive than it has been in a long time with United States, Canadian and Scandinavian prices all very close, taking into account freight allowances, etc., except, of course, in some specialty grades. The $5 a ton increase in various Scandinavian grades for the first quarter was quickly followed by a Canadian increase of $5 on unbleached sulfite to $125 and on unbleached kraft of $5 to $115. These were expected because of mounting costs in Canada, the 35 loss in exchange differential, and —in the case of kraft—the differential in grades had been about $40.

U.S. prices were generally unchanged, though International Paper unbleached kraft went up $5. Marathon's Canadian bleached kraft rose $2.50 to $147.50.

NEW MEAD SUBSIDIARY—Mead Sales Co. of Dayton, O., distributor of paper and pulp since 1921, has incorporated its pulp department as a new subsidiary under the

PROGRESO EN EL NOROESTE—Sigue aumentando el desarrollo del corte de maderas pulperas en la parte norte de la costa del Pacífico en E.U., a pesar de establecerse varias nuevas plantas consumidoras de pulpa, las que usan pulpa que anteriormente se enviaba a otras partes.

En Febrero, la U.S. Forest Service, entidad encargada del asunto de parte del gobierno federal norteamericano, se espera que otorgará derechos de desarrollo de 13.900.000 pies de madera en los alrededores de Juneau, Alaska, a la Georgia Pacific Plywood Company, que también tiene grandes propiedades en el estado de Oregon. Aunque el otorgamiento será a base de venta pública, no se espera que haya otro solicitante.

En Port Alberni, British Columbia, se espera que la próxima construcción de parte de la MacMillan-Bloedel será una fábrica de pulpa kraft. Se sigue hablando en el Noroeste de que se unirán grandes compañías madereras como Pope & Talbot, con empresas fabricantes de pulpa o papel.

La madera sobrante de los aserraderos de abeto todavía queda como una fuente casi inagotable de pulpa para futuras fábricas en el Noroeste. También se esta usando mayor cantidad de madera de aliso.

MAS EXPORTACION—Sigue aumentando la exportación de pulpa de los E.U. En Noviembre de 1954 los envíos subieron a 40.000 toneladas, excediendo el promedio mensual durante el año, que fué 34.000 toneladas. En 1953 el promedio mensual se marcó en 13.500 toneladas.

En Europa se pide más pulpa escandinava y norteamericana, lo que ha influido en el aumento de precio de la pulpa de Suecia exportada a los E.U. Sr. Sverker Kastrup, director de la Swedish Cellulose Company, calcula que los consumidores europeos tuvieron a su disposición 1.300.000 toneladas más que anteriormente, sin tomarse en cuenta los cambios en las cantidades de existencias. En Europa misma, el sobrante de producción fue 900.000 toneladas, el mayor desde hace muchos años.

MAS COMPETENCIA—En E.U., la competencia en ventas es la más aguda desde hace muchos años. Tomando en cuenta costos de transporte, etc., los precios de la pulpa de E.U., Canadá y Escandinavia están muy iguales, menos por supuesto los de ciertos grados especiales. Varios grados de pulpa escandinava aumentaron en precio por 5 dls. tonelada, y pronto siguió un aumento de 5 dls. por sulfito sin blanquear del Canadá, llegando el precio a 125,00 dls., al mismo tiempo que el kraft sin blanquear aumento 5 dls. hasta 115,00 dls. Estos aumentos no fueron inesperados, considerándose los mayores costos de producción en el Canadá, también la pérdida en el cambio de moneda. La diferencia de precio entre grados, en caso del kraft, anteriormente fue al rededor de 40,00 dls.

BY-PRODUCT OF WEST COAST PULP

High alpha woodpulp from Columbia Cellulose Co., Prince Rupert, B. C., is sent to its associated $70,000,000 Canadian Chemical Co. plant at Edmonton, Alberta, also in Canada, where it is processed into acetate yarn and staple fiber. This is finishing room where yarn is collected on bobbins, as shown, and twisted to provide additional strength. Then it is wound on cones for shipment to textile mills. This is the coning operation. Liquefied petroleum gases from Alberta are used with the cellulose to make the yarn. Both companies are subsidiaries of Celanese Corp. of America.

name, Mead Pulp Sales, Inc. George H. Mead is chairman and Sydney Ferguson is president. David Brittain, head of the Chicago pulp office, continues as vice president. New vice presidents are Nelson Mead, Dayton, O., and W. M. Barrett, head of the New York pulp office. Robert J. Burke continues with the new company as consultant and a director.

BRITISH COLUMBIA PULPS STRONG—British Columbia market pulp manufacturers report continued strong demand, especially for bleached grades. A MacMillan & Bloedel spokesman said they are meeting increasing competition overseas and in U.S. from Southern (U.S.) kraft pulps. A rapid rise in pulp demand in Germany is reported.

T. Lloyd Roberts, manager of sales, Alaska Pine & Cellulose division of Rayonier, and Alan McCririck, recently returned from the Far East, report stronger demand for rayon grades in Japan. Other reports said Japan is pushing its rayon sales to Red China since losing much of the India market to Italy.

NEW LONDON OFFICE FOR BULKLEY DUNTON—Recognizing the growing importance of the British market for North American producers, the Bulkley, Dunton Pulp Co. has opened an English office to be operated by Bulkley, Dunton Pulp Co., Ltd. at 34-40 Ludgate Hill, London E. C. 4.

The new organization will devote its entire time to merchandising American and Canadian pulps only in the British market. Executives are Denis Becker, Harry Taylor and Leo Bowmall. Mr. Bowmall has been with B-D many years. Mr. Becker and Mr. Taylor were associated in pulp and paper trade in London for over 30 years.

NEW SWEDISH MILL—Swedish Cellulose Co. is considering a new two-machine newsprint mill in the Sundsvall district, to make 130,000 long tons per year. This would be expected to reduce available pulp for sale.

CANADIAN RECORD—Canada made 9,900,000 tons of woodpulp in 1954, a new all-time record. This is 5% over 1953 and 2% over the 1951 record. Gross value of $1,200,000,000 is about equal to 1951.

SUBPRODUCTO DE LA PULPA CANADIENSE

Pulpa leñosa de la Columbia Cellulose Company, Prince Rupert, provincia de British Columbia, Canadá, se envía a la planta hermana de la Canadian Chemical Company en Edmonton, provincia de Alberta, donde se convierte en hebra o lana de acetato celulósico. Aparecen en la foto las máquinas que colectan la lana en carretes y la tuercen para darle mayor fuerza. Más tarde se enrolla en conos para enviarse a las fábricas de telas. Aquí se ve la enrollada. Para fabricar la lana se usan gases de petróleo en forma líquida, extraídos en la misma provincia de Alberta. Las compañías Columbia Cellulose y Canadian Chemical son dependencias de la Celanese Corporation of America.

Los precios de pulpa norteamericana cambiaron poco. International Paper Company kraft aumentó 5,00 dls., y el kraft blanqueado canadiense de la compañía Marathon aumentó 2,50 dls. hasta 147,50 dls. tonelada.

NUEVA DEPENDENCIA MEAD—Mead Sales Company de Dayton, Ohio, E.U., empresa vendedora de papel y pulpa desde 1921, ha establecido aparte el departamento de pulpa, nombrándolo Mead Pulp Sales Inc. Sr. George H. Mead es jefe de la junta directiva y Sr. Sydney Ferguson presidente. Sr. David Brittain, jefe de la oficina encargada de la pulpa ubicada en Chicago, sigue vice presidente. Fueron nombrados vice presidentes Sres. Nelson Mead de Dayton, y W. M. Barrett, jefe de la oficina en Nueva York. Sr. Robert J. Burke sigue como consultor y miembro de la directiva.

FUERTE DEMANDA—Fabricantes de pulpas de British Columbia declaran que sigue fuerte la demanda, pidiéndose especialmente la blanqueada. Se dice que aumenta la competencia tanto en el estanjero como en E.U., de parte de las fábricas de pulpa kraft de la región sur de los E.U. En Alemania aumenta la demanda.

Sr. T. Lloyd Roberts, gerente de ventas de la Alaska Pine & Cellulose, dependencia de Rayonier, y Sr. Alan McCririck regresaron ultimamente de un viaje por el Oriente declarando que en el Japón se encuentra mayor demanda de pulpa para rayón. También se declara por otros lados que el Japón está solicitando ventas en la China Roja, habiendo perdido las ventas que anteriormente gozaba en la India, debido a los esfuerzos de los fabricantes italianos.

OFICINA EN LONDRES—Reconociendo la importancia del mercado en Inglaterra, la compañía norteamericana Bulkley, Dunton Pulp Co. ha establecido una oficina en Londres, dirección 34-40 Ludgate Hill, London E.C. 4. Dicha sucursal quedará bajo la gerencia de la Bulkley, Dunton Pulp Co. Ltd.

La nueva oficina se dedicará enteramente a la venta de pulpas americana y candiense en las islas británicas. Los jefes son Sres. Denis Becker, Harry Taylor and Leo Bowmall. Sr. Bowmall tiene muchos años de asociado con Bulkley, Dunton; Sres. Becker y Taylor han sido comerciantes en pulpas y papel en Londres durante más de 30 años.

NUEVA PLANTA EN SUECIA—La Swedish Cellulose Company tiene proyectada una fábrica de papel para periódicos con dos máquinas completas, cerca de Sundsvall, que producirá 130.000 toneladas anuales. Así se reduciría la cantidad de pulpa disponible para vender al mercado.

UN RECORD EN EL CANADA—En el Canadá se produjeron 9.900.000 toneladas de pulpa en 1954, un record hasta ahora, siendo 5% más que la producción de 1953 y 2% más que 1951. El valor grueso de 1.200.000.000 dls. iguala al de 1951.

More New Mills for West and South

MacMillan plans newsprint and board mills and more pulp; Potlatch orders machine; many plans in South

• Pulp and paper expansion in the South keeps a-rolling along—like the South's biggest river in the song. And in the Far West—both U.S. and Canada—it gets bigger and bigger, like many-times-told Paul Bunyan stories.

Expansion programs actually under way or being planned in the United States and Canada have boosted figures for new machines and mills coming into production 1955-1957, as compiled by an exclusive field survey by PULP & PAPER's coast-to-coast staff of editors.

Now it adds up to no less than 31 entirely new machines. Counting those in the "talk stages," the total is 46. There are, of course, more "very tentative" and "very secret." There will be many more rebuilding jobs, perhaps 100 or more, generally aiming at upgrading or speedups.

An APPA report forecast in U.S. alone 185,000 tons more capacity in paper and 196,000 more in board in 1955. For 1956, it foresees 190,000 more paper, 146,000 more board. For 1957, 85,000 paper, 25,000 board. Obviously, for years beyond this and next year, many new plans may yet be born. Based on what it now can learn, APPA reckons a U.S. total capacity increase of 1,250,000 tons by 1956—to 30,442,000.

MACMILLAN PLANS TWO MORE MILLS—There is no bigger news this month than the $30,000,000 MacMillan & Bloedel Ltd. program for not only a sulfate pulp expansion but a newsprint mill (sulfate pulp furnish) and kraft and containerboard mill at Port Alberni, B.C., by 1957, making that a great center for diverse forest products. Among forest industries already there is an unbleached kraft market pulp mill. The new program calls for partially bleached pulp.

MacMillan & Bloedel is one of the major timber use operations on the continent and its investment in pulp and paper alone will be over $90,000,000. This expansion has long been anticipated, but going into newsprint was a surprise.

Pulp production will be stepped up to 335 tons a day at Alberni. The newsprint mill will be 300 tons (later to be doubled) and the board mill, 100 tons a day. Howard Simons, Vancouver, B.C., is consulting engineer.

Mr. Simons is also consulting for the new St. Regis-North Canadian Oils joint market kraft pulp mill at Edson, Alberta (Justin McCarthy, St. Regis, is chief engineer in overall charge); for the Cowichan Bay, B.C., bleached kraft mill which B.C. Forest Products Ltd. is planning, and for the Crown Zellerbach (Elk Falls, B.C.) $15,000,000 kraft pulp mill being built at Duncan Bay, B.C.

OTHER CANADIAN PLANS—The go-ahead signal from the British Columbia government has stimulated the Powell River Co.-Aluminum Co. of Canada joint project for a newsprint and a kraft pulp mill (possibly some for market) at Minette Bay, 5 miles from Kitimat, B.C. Sandwell & Co. are engineers. Test drilling has been carried out.

No one expects Rayonier to stand still with its new Alaska Pine & Cellulose Division (two market mills and 8 billion ft. of timber), as A P & C had expansion plans under way before the deal. Abitibi and the Koerner interests each received $9,838,281 for the 80% sold.

A $15,000,000 new paperboard mill at LaTuque, Que., is biggest new project in East Canada. Canadian International is building it alongside its newly acquired kraft pulp mill there. The machine is already ordered from an American builder. Doubling of Dryden, Ont., mill capacity, Hearst plans for pulp and newsprint at Sheet Harbor, N.S., and other Canadian projects are under way.

GEORGIA-PACIFIC PLANS—In the Far West, forest industry operators have eyes glued on the dynamic Georgia-Pacific Plywood Co. Its purchase of a cool billion ft. of timber in Western Lincoln County, Ore., is almost sure to mean a new pulp mill there. Meanwhile, Georgia-Pacific is due in a few weeks to make a contract and payment to the U.S. Forest service for the Juneau, Alaska, newsprint-pulp mill timber allotment. This two-way G-P activity has observers a little giddy, but the guessing is the Oregon mill will come first for sound economic reasons. However, there was recent heavy trading in Alaska Juneau Mining stock. This company is willing to trade its Juneau power plant for an interest in the Georgia-Pacific pulp mill; some think maybe it has, already. In the meantime, G-P is making a study of mill water resources with the Toledo, Ore., water and power commission.

H. R. MacMILLAN, Chairman of MacMillan & Bloedel, which plans kraft mill expansion, also a newsprint mill and a containerboard mill at Port Alberni, B.C.

POTLATCH ORDERS MACHINE—Potlatch Forests Inc. is building another 200 ton pulp and foodboard mill alongside its present one at Lewiston, Ida., to start up late this year. A Black-Clawson cylinder machine, General Electric turbine, a 300-ton Babcock & Wilcox recovery unit with venturi scrubber combination, Allis Chambers pumps and motors, and Pandia continuous digesters will feature the big addition.

The new Potlatch paper mill will be 800 ft. long, between the present plant and the river. It will make bleached boxboard and unbleached corrugating. Total PFI tonnage will be 525 tons.

The long-expected move of Kimberly-Clark to the West Coast has materialized as it builds a new tissue (wadding) paper mill at Fullerton, Calif., with pulp expected from Pacific Northwest mills. Weyerhaeuser and Rhinelander also finally combined for a big modern glassine mill, hooked onto slush pulp supply from Weyerhaeuser's sulfite mill in Longview, Wash.

Simpson Logging Co. has changed its name to Simpson Timber Co., accenting the fact that this half century old lumber firm is headed for more diverse expansion, including pulp and paper products, particularly at its Everett paper mill.

WATCH USE OF ALDER AND DOUGLAS FIR—Anyone not paying attention to the increasing use of the recently despised alder (like popular)

in the Pacific Northwest is behind the times. At least five mills out there now are using alder for more pulp and paper products. Major companies count on it for important supplies. It is regarded highly for semi-chemical.

Even more important than this—those "in-the-know" out West say there will be the greatest expansion in the next few years in using Douglas fir second growth and sawmill-plywood left-overs. Available supply of this resource has only begun to be used.

No one expects Western Kraft Co., Albany Ore., the new sawmill-supported board mill dreamed up by Ira Keller, will stay put long at only 100 tons of board. Longview Fibre has an Oregon mill site and is expanding 150 tons at Longview. Weyerhaeuser starts its new 165 in. Beloit board machine soon at Longview. Crown Z is rushing its new big Beloit tissue machine at St. Helens and new kraft paper mill at Antioch, Calif. Scott's 3rd and 4th tissue machines start up this year at Everett. A wide variety of wood species are used here.

Tying in with Western expansion is increasing paper and board converting capacities in California. American Forest Products Corp., San Francisco, is building a new $2,500,000 containers plant at Newark, Calif.

BIG PLANS IN SOUTH—turning to the South, there are at least 16 entirely new paper machines in this area considered "sure" in the next couple of years. One very big mill is definitely looking for a new second location, where it can install two more machines.

In order that Hollingsworth & Whitney division at Mobile can keep up production of its own successful products and also get into production of Scott products, considerable expansion must be carried out.

The newspaper-supported newsprint mill to be built by Dierks Forests Inc., owner of 1,700,000 acres of timber, has taken a new tangent. Instead of Hugo, Okla., it is suggested the site may be DeQueen, Ark., just across the line from there and about 100 miles northwest of IP's Camden, Ark., mill. Dr. Charles Carpenter is consultant.

Gaylord Container Corp. has increased its authorized shares from 2,925,000 to 4,000,000 and it is well known that substantial expansion proposals are being discussed.

Two northern companies are actively looking for deep South sites.

Hudson Pulp had a press party in New York to expound plans for a new paper machine, new research

KEY FIGURES IN NEW R-W PAPER CO

Top row—l to r: FOLKE BECKER, President of new company and Chairman of Rhinelander; HOWARD MORGAN, a Director of R-W and Vice Pres. and Pulp Div. Mgr. of Weyerhaeuser; BENTON R. CANCELL, an R-W Director and President of Rhinelander.

Lower row—l to r: W. P. GULLANDER, of Weyerhaeuser, who is Vice Pres. and Treasurer of R-W Paper; GEORGE S. LONG JR., also of Weyerhaeuser and Secretary of the new firm; and ROBERT F. NELSON, an R-W Director and Exec. Vice Pres. of Rhinelander.

More About West's New Glassine Mill

What is described as the most modern glassine and greaseproof paper machine in the world will grace the new R-W Paper Co. mill which will rise in Longview, Wash., the bustling Columbia River port city which already is the biggest and most diversified forest products industrial center in the world.

The new mill, due to start up about May 1, 1956, is a joint venture of Weyerhaeuser Timber Co. and Rhinelander Paper Co.

"For several years we have been considering a move to the Pacific Coast, to bring our Ripco products closer to a rapidly growing population area and market area," explained Folke Becker, president of the new company and chairman of the board of Rhinelander. "Our situation in Wisconsin has reached a point of where, on the basis of wood supply, freight rates, and markets, it is important that we move westward." Rhinelander is 51 years old this year.

Howard Morgan, manager of Weyerhaeuser's Pulp Division, and a director of the new company, stressed the fact that additional pulp facilities will be added to supply the requirements of the new company, and Weyerhaeuser's present production of market wood pulp will in no way be affected.

Rhinelander's engineering staff will have charge of internal design and equipment installation. Weyerhaeuser's engineers will design and build the exterior plant.

Pacific Coast populations have jumped about 50% in just one decade and some historians say it is the greatest influx of population in world history. Many industries have moved there and will furnish markets for glassine and greaseproof papers.

Rhinelander has added three large glassine and greaseproof machines at its Wisconsin operation since 1941. It was logical for this company to make its next move to one of its more distant markets. It has been one of the most dynamic companies in this industry.

New products developed in the past year by Rhinelander are Gourmet frozen food locker paper, master whiteprint papers for Ozalid and Bruning type copying, Clarophane, a moisture vapor protective coated glassine, translucent photo paper stock, and special packaging papers for meats, baked goods, and dairy products.

The officers of the new company are Folke Becker, president; W. P. Gullander, vice president and treasurer; George S. Long, Jr., secretary; and Miss Ruth Neumann, assistant secretary.

Directors of the new company are J. P. Weyerhaeuser, Jr., Charles H. Ingram, Howard W. Morgan, Folke Becker, B. R. Cancell, and R. F. Nelson.

center, etc., at Palatka, Fla., with J. E. Sirrine as consulting engineers.

International started a new cylinder machine at Springhill, La. Crossett will start up its neutral sulfite semi-chemical container board mill by this year's end, and East Texas P & P smoothly started on board and market pulp.

WEST VIRGINIA'S "REVOLUTIONARY" BOARD—Southern experts consider one of the really "big things" in1955 will be West Virginia P & P's new "revolutionary" liner-board grade with improved color, surface and ink receptivity. Hinde & Dauch Corabrite boxes use this new "ISL" board. With the new machine for Charleston, S. C., West Virginia will convert full capacity at that mill to the new grade, a 100% pine kraft primary sheet, with kraft hardwood secondary surface layer.

Halifax Paper Co., Roanoke Rapids, N.C. is increasing pulp production potential from 330 to 500 tons a day. New Goslin-Birmingham evaporators, new Impco washers and other additions will make this possible. Shartle jordans and Beloit felt dryers are among No. 3 paper mill additions. This mill is a division of Albemarle Paper.

It is very likely the next big recovery boiler—biggest in the world, at 540 tons capacity—will be announced before long for a big Southern mill.

Bowaters plans for expanding further at Calhoun, Tenn., were told in January PULP & PAPER. Southland's Pusey & Jones newsprint machine will roll in 1956. St. Mary's will have a new machine. Gulf States has plans at Demopolis, Ala. Talk persists about the Choctaw mill for Butler, Ala., another possible mill at Brewton, Ala., and still another on the Chunky River in Mississippi.

NORTHEAST AND MIDWEST ARE BUSY—Kalamazoo Paper and Lee Paper have both presented plans to the state for expansion and Lee Paper already announced its order for a new machine. Port Huron Sulphite & Paper announced it would install a new 6th paper machine. KVP Co. at Parchment, Mich., plans two new high pressure boilers and generators in the next three years, but other details are not ready to be told.

Another big Michigan mill has just recently ordered a new paper machine to make quality light paper.

Watervliet Paper's $1,200,000 semi-chemical expansion to 50 tons, long expected, adds white paper uses for this Cinderella pulp.

Increasing output 50%, Beckett Paper Co., Hamilton, O., is adding a 60 ton a day 130 in. Fourdrinier.

Warren's expansion at Muskegon, Mich., Marathon's new 173 in. Beloit Yankee for Green Bay, Wis., Hammermill's semi-chemical expasion, N.Y. & Penn's new machine at Lock Haven, Pa., Dexter & Sons new Rice Barton machine at Windsor Locks, Conn., and of course, the big 276-in. newsprint machine going in at Great Northern, Millinocket, Me., in 1956, duplicating one recently started up, are highlights in Midwest and East.

NEW EXECUTIVES FOR HUDSON PULP & PAPER

WILLIAM MAZER (left) has been appointed president of Hudson Pulp & Paper Corp., and JACOB MAZER (right) moves up to become chairman of the board, vacant since the death of Abraham Mazer two years ago. Two new vice presidents also were appointed, as IRWIN A. ZUCKERMAN moves from sales manager to vice president in charge of consumer products, and RAYMOND S. HATCH, former director of research, becomes vice president in charge of research.

Concurrent with the announcement of these new appointments, Hudson is launching an intense advertising and sales promotion campaign to introduce its new products—an integrated line of paper napkins, towels, facial and toilet tissue, which mark its entry into more diversified manufacture. To achieve this additional production, an expansion program involving new bleach plant and new machine for the Palatka, Fla., mill is underway, which will make this mill the first completely integrated tissue mill in the South.

These Men Make Plans For New Coast Mill

Here are key personnel for new Western Kraft Corp., initially planned as a 100-ton containerboard mill at Albany, Ore., based on extensive supply of lumber and plywood left-over chips in that area. In our December issue, we announced Ora Hisey, a former Oregonian and lately v. p. with Sandy Hill, joined this new firm as production manager.

Ira C. Keller, former executive vice president of Container Corp. of America, now living in Portland, Ore., "dreamed up" this new mill. It will have a Bagley & Sewall 164 in. Fourdrinier and B & W recovery system.

Executive Vice President Robert V. Hansberger, after receiving a master's degree from Harvard, joined Container Corp. of America in 1947.

Last year he left that organization and affiliated with Mr. Keller in establishing Western Kraft and making preliminary designs. He's been prominently involved in purchasing equipment, awarding contracts, and will be responsible for over-all operations when they start late this year.

While with Container Corp., Mr. Hansberger participated in engineering of Muskogee, Okla. and Picqua, O. plants, was chief engineer of East-West Coast division from 1949 until 1951 when he became assistant to Mr. Keller, this change adding sales and other responsibilities to his previous duties. In 1953 he became budget director.

John Beaver, chief engineer of the new mill, was in Tacoma, Wash. as consulting engineer. He was involved in many Pacific Coast mill projects.

LEADERS IN NEW MILL

IRA C. KELLER, Pres. of new Western Kraft Corp., whose mill is being built at Albany, Ore.

ROBERT V. HANSBERGER (left), Exec. Vice Pres., and JOHN BEAVER (right) Chief Engr. for Western Kraft.

Pope & Talbot Gets Washington Chip Plant

Crown Zellerbach Corp. has sold its Port Gamble, Wash. chipping plant to Pope & Talbot, Inc. The purchasing firm is installing a mechanical barker, a new chipper and will supply chips to CZ Port Townsend mill.

Reports continue to circulate that Pope & Talbot, with extensive timber holdings on the Pacific Coast, might merge with some prominent paper-making company.

Kimberly-Clark Goes West to Expand

Pulp for its seventh wadding mill is anticipated from Pacific Northwest mills, water from Colorado River

• The 82-year old Kimberly-Clark Corp., after years of studying Pacific Coast marketing and woodpulp supply potentials, has decided to build its seventh cellulose wadding mill in the Far West. Chosen site is amid orange groves of Fullerton, Calif.

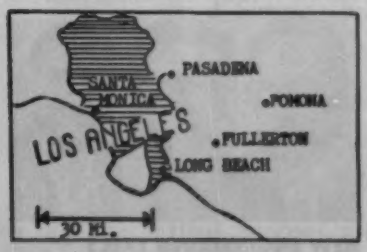
Woodpulp for a one-machine mill, it is anticipated, will come from Pacific Coast market pulp mills. The new mill will be basically dependent on the great Colorado River for its water, purchased through the City of Fullerton, which is an original member of the Los Angeles Metropolitan Water District. Many thousands of gallons a day are required for this specialty process, as for other papermaking processes.

Adjunct of the mill will be a typical Kimberly-Clark automatic converting department, making Kleenex, Kotex, Delsey toilet tissue and other new K-C wadding specialties, presumably. The primary reason for the mill is to reach more economically the fast-growing Pacific Coast creped wadding and tissue markets. Operations will begin in Jan. 1956.

JAMES A. MURPHY, named Proj. Mgr. at Fullerton, Calif. — Res. Mgr. in 1956.

WADDING MACHINE NO. 20—Here will be cellulose wadding machine No. 20 for K-C, probably as large and as modern as the most recent ones at Memphis, Tenn., Kapuskasing, Ont., and other mills. This would call for a Fourdrinier Yankee machine with the special K-C designed high speed headbox and other features. K-C now has 4 wadding machines each at Niagara Falls, N.Y., Badger-Globe Div., Neenah, Wis., and Memphis. It has 5 at Lakeview Div., Neenah, and two in Kapuskasing. Capacities of some of these machines also are being increased.

Of course, K-C also has book paper mills at 3 sites, a big kraft pulp mill in Canada, 50.12% ownership in Kapuskasing newsprint mill, 39% in the Coosa River mill in the South, a wallpaper mill, its own machinery plant and 3 pulpwood companies in Minnesota, Michigan and Ontario.



FULLERTON, ORANGE COUNTY, is site for latest Kimberly-Clark mill. Will make paper and convert to Kleenex, Kotex and other products by Jan. 1956. Like Pomona, site of Potlatch Forests lightweight papers mill, Fullerton also is in heart of famed California orange groves. Orange growers happily receive effluent water from Pomona mill, which they are eager to use for humus. The shaded portion of map is metropolitan Los Angeles.

Last major move in the tissue world by K-C was to Memphis. Even then, a Coast move was being considered. The site finally chosen is 25 miles southeast of Los Angeles proper. Fullerton has 30,000 population.

James A. Murphy, director of development and administration for K-C research at Neenah, is expected to be resident manager of the new mill. He will be project manager during construction.

The main plant structure will be one story of concrete and glass. It will house the machine, automatic converting equipment, technical control and operating offices, as well as lockers and rest rooms. Floor space will be 250,000 sq. ft. There will be a separate smaller building for general offices. This will all be on a plot, ½ mile by ¼ mile in size, surrounded by orange groves. About 300 will be employed.

Skidmore, Owens and Merrill is designing the new plant buildings. This firm is also designer of Kimberly-Clark's new general headquarters offices which are being built on a lake shore just outside Neenah. K-C has its own engineering and construction staff for the new mill.

Kimberly-Clark's cellulose wadding sales reached a record high of $107,895,621 in the 1954 fiscal year (203,247 tons). Currently tissue industry sales are still climbing. K-C income from wadding products has increased every year ($95,962,315 in 1953) although in tonnage it declined in only one year (to 174,261 tons in 1953, from 181,397 in 1952, but then went up 17% last year).

Total K-C sales reached new highs in the past four successive years, reaching 177,281,440 in 1954, up $13,660,646 from the 1953 fiscal year.

DEVELOPS NEW PRODUCTS—In wadding markets K-C is developing new products. Already in use are new Sanex towels, beauty shop pads, and Kimpak for packing television sets or furniture to even actually overwrapping a giant diesel locomotive.

San Francisco is already site of one of four district sales offices, others being New York, Chicago and Atlanta. A network of salesmen and distributors is already established on the coast.

K-C's executive committee consists of Cola G. Parker, chairman of the board, John R. Kimberly, president, W. R. Kellett, executive vice president, Charles H. Sage and W. H. Clifford, with retired Ernst Mahler as alternate. Other board members are F. S. Seaborne, R. W. Lyons, Louis Quarles, J. S. Sensenbrenner and S. F. Shattuck. The late Henry G. Boon also was active in planning west coast moves while on the board.

Alaska Timber Going To Georgia Pacific

Georgia Pacific Plywood Co. is expected in February to contract with the U.S. Forest Service for longterm cutting rights to two large blocks of timber in the Juneau, Alaska, area, sufficient to support a 500 tons-per-day newsprint or pulp mill.

Georgia Pacific has bid for this timber and the auction sale is due in February in Washington, D.C. No other bidder is anticipated and the timber is expected to go to Georgia Pacific for a substantial down payment. It totals 13,900,000,000 ft. of mostly hemlock and spruce. On a 100-yr. rotation, 150,000,000 ft. (300,000 cords) can be cut annually.

PICTURE NEWS OF THE INDUSTRY

McCALL SUCCEEDS MOODY

DONALD F. McCALL (left) is new Vice Pres. and Gen. Mgr. of Everett (Wash.) Pulp & Paper Co., division of Simpson Timber Co., succeeding ANSON B. MOODY (right), who completed 28 years with the Everett firm. Business friends and associates paid tribute to Mr. Moody, who recently was also Pres. of the Pac. Coast Assn. of Pulp & Paper Mfrs., at a Seattle luncheon. He also served during the war on the WPB industry Advisory Committee. Mr. McCall, Asst. Mgr. at Everett since 1953, was born in Muskegon, Mich., graduated from Dartmouth in 1927, and was Vice Pres. and Director of Racquette River Paper Co.

IN KEY POSTS FOR SCOTT IN CHESTER AND B. C.

In connection with Scott Paper expansion these two have new important jobs: FORREST W. BRAINERD (left), called back to Chester, Pa., headquarters from Wisconsin to be special Assistant to Executive Vice Pres. RAYMOND C. MATEER in coordinating newly acquired production and machines (H & W Co., Detroit Sulphite and Westminster Paper mergers) with Scott's other facilities. Mr. Brainerd, who has been Mgr. at Oconto Falls, Wis., made a trip to Europe last year.

CHARLES W. CARD (right) in new position, Director of Product Standards for Canada with headquarters at Westminster Paper Co., New Westminster, B.C., where ELMER HERB continues as Mgr. This mill soon will be marketing Scott products and Mr. Card assists in changes necessary. He joined Scott in 1935. Both Mr. Brainerd and Mr. Card have held varied jobs with Scott and both have been Vice Presidents and Managers of its Pacific Coast mills.

RUSS FLOM IS "PROMOTED"

RUSSELL C. FLOM (left), recently "promoted" from Director of the Forest Products Division to Assistant Administrator of the Business and Defense Services Administration in Washington, D. C., is being congratulated by COMMERCE SECRETARY WEEKS (right). The word "promoted" is used advisedly—for Mr. Flom is still only on loan from his post as Marathon's Director of Sales of Pulp and Paper. His new duties in Washington give him responsibilities over a dozen industries, including forest products, containers and packaging, textiles, building materials, chemicals, etc.

RISLER TOURS FAR WEST

FRED RISLER (left), Sales Mgr., Hanchett Mfg. Co., Big Rapids, Mich., accompanied by HUGH MILLER (right), Portland, Ore., in charge of sales on West Coast, recently toured several mills in that area, contacting users of Hanchett knife grinding equipment. Appraising the market a year after Hanchett opened new Portland factory branch, Mr. Risler said it was providing better facilities on smaller products and a lot of industry key men have visited the new plant.

FOR GENERAL DYE IN WEST

PAUL J. PERNICE (left), new General Dyestuff Corp. Representative based in Terminal Sales Bdg., Portland, Ore., for service to Pacific Northwest mills, talks over duties with his Pacific Coast Mgr., ROBERT M. TRUE (right), who formerly held the Portland post. Mr. Pernice is a graduate of Fordham University. A new General Dyestuff sample book shows there are now 609 colors available to the paper industry!

BOTH ARE FLINTKOTE EXECS

BILL MOORE (left), new Assistant to Research Director, The Flintkote Co., Whippany, N. J., says "adios" to his successor as Technical Director of The Flintkote Pioneer Division, Los Angeles—FRED HANEY (right). Mr. Moore joined Flintkote 12 years ago, was Mgr. of Portland, Ore., plant 5 years before becoming Tech. Director at L.A. in 1952. Mr. Haney, with Flintkote one year as Mgr. of Paperboard Quality Control and Product Development, had been Research Director for Johnson & Johnson, Chicago, and was with Dow and Shell Oil as chemist.

RAYONIER MEN IN NEWS

DR. JOHN P. HOLLIHAN (left) has joined Rayonier, Inc. as Technical Service Representative. He has been head of viscose research at American Viscose Corp., Marcus Hook, Pa.

DR. EDWIN L. LOVELL (right), Rayonier Research Manager, Shelton, Wash., who addressed Petroleum Club in Houston, telling them of Rayonier's new bark product "Rayflo"—used in oil fields to improve consistency of drilling mud.

NEW ENGINEERING EXECS

New engineering execs for Black-Clawson Cos. (l to r): LARRY A. MOORE, Chief Engineer of Hamilton, O., Division; was former Chief Engineer of American Coating Mills, Elkhart, Ind., before joining B-C in 1953. JAMES H. MARDINDALE, Chief Engineer of Shartle Bros. Division, which he joined in 1941 as expediter. FRANK C. DUVALL, named First Asst. Chief Engineer at Shartle Division, in charge of all production engineering. He joined Shartle in 1934.

BIRD SCREENS

the Final Guardian of Paper Quality

Bird Screens are the last barrier to dirt and damage — just ahead of the paper machine wire.

Bird Screens with fine slotted screen plates positively remove any foreign particles larger than the slot width.

On coarser grades, Bird Screens with plates of increased slot width provide ample capacity while protecting the wire and maintaining high standards of quality and uniformity.

Bird Screens are in there to help you score a shutout against dirt. Make sure yours are adequate and up-to-date.

BIRD MACHINE COMPANY

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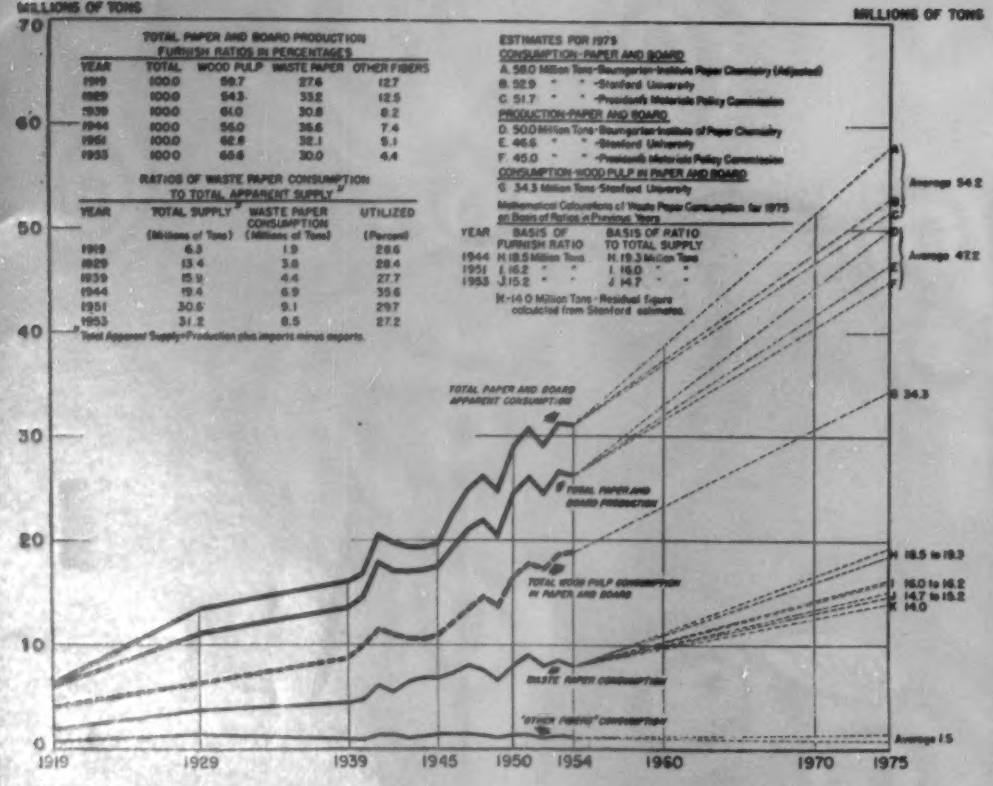

MILLIONS OF TONS
MILLIONS OF TONS
TOTAL PAPER AND BOARD PRODUCTION
FURNISH RATIOS IN PERCENTAGES
YEAR TOTAL WOOD PULP WASTE PAPER OTHER FIBERS
1919 100.0 59.7 27.6 12.7
1929 100.0 54.3 33.2 12.5
1939 100.0 61.0 30.8 8.2
1944 100.0 56.0 36.6 7.4
1951 100.0 62.8 32.1 5.1
1953 100.0 65.6 30.0 4.4
RATIOS OF WASTE PAPER CONSUMPTION TO TOTAL APPARENT SUPPLY
YEAR TOTAL SUPPLY (Millions of Tons) WASTE PAPER CONSUMPTION (Millions of Tons) UTILIZED (Percent)
1919 6.3 1.9 28.6
1929 13.4 3.8 28.4
1939 15.9 4.4 27.7
1944 19.4 6.9 35.6
1951 30.6 9.1 29.7
1953 31.2 8.5 27.2
Total Apparent Supply=Production plus imports minus exports.
ESTIMATES FOR 1975
CONSUMPTION-PAPER AND BOARD
A. 58.0 Million Tons-Baumgarten Institute Paper Chemistry (Adjusted)
B. 52.9 " " -Stanford University
C. 51.7 " " -President's Materials Policy Commission
PRODUCTION-PAPER AND BOARD
D. 50.0 Million Tons-Baumgarten Institute of Paper Chemistry
E. 46.6 " " -Stanford University
F. 45.0 " " -President's Materials Policy Commission
CONSUMPTION-WOOD PULP IN PAPER AND BOARD
G. 34.3 Million Tons-Stanford University
Mathematical Calculations of Waste Paper Consumption for 1975 on Basis of Ratios of Previous Years
YEAR BASIS OF FURNISH RATIO BASIS OF RATIO TO TOTAL SUPPLY
1944 H 18.5 Million Tons H 19.3 Million Tons
1951 I 15.2 " " I 16.0 " "
1953 J 15.2 " " J 14.7 " "
K-14.0 Million Tons-Residual figure calculated from Stanford estimates.
Average 54.2
Average 47.2
TOTAL PAPER AND BOARD APPARENT CONSUMPTION
TOTAL PAPER AND BOARD PRODUCTION
TOTAL WOOD PULP CONSUMPTION IN PAPER AND BOARD
WASTE PAPER CONSUMPTION
"OTHER FIBERS" CONSUMPTION
G 34.3
H 18.5 to 19.3
I 16.0 to 16.2
J 14.7 to 15.2
K 14.0
Average 1.5
70
60
50
40
30
20
10
0
1919
1929
1939
1945
1950
1954
1960
1970
1975

TRENDS OF UNITED STATES PAPER AND BOARD CONSUMPTION AND PRODUCTION, COMPARED WITH CONSUMPTION OF WOOD PULP, WASTE PAPER AND OTHER FIBERS

Prepared by LeRoy Neubrech, Forest Products Div., BDSA.

What's in Store at "Paper Week"

There will be much optimism . . . interest in Stanford Report, growing pulp exports . . . TAPPI highlights.

● Thousands of management, sales and technical men of this industry will make their annual pilgrimage to mid-Manhattan during Washington's birthday week in a much more confident mood than a year ago. It is Paper Week time again, and the big question on many thousands of lips will be: "What kind of a year will it be?"

Last year there was some downright gloom mixed with trepidation and a reserved sort of confidence. But not this month. The strong surge of production that closed out the last weeks of 1954, featured by a surprising fast-recovery in paperboard, too, has many observers looking for a new all-time record year in 1955—somewhere over 27,000,000 tons paper and board production in the U.S.A. However, there were some discerning industry leaders who noted a few inflationary signs in the economic picture, not so bad as to be alarming, but to be noted, nevertheless.

There are over 100 individual meetings comprising the 78th annual of the American Paper & Pulp Association, which takes over the Waldorf-Astoria hotel (cover picture) Feb. 19-24. So it would be difficult indeed to pick out the major subjects. There is certain, however, to be much discussion of the export field, especially among pulp manufacturers, of the President's renewed request for tariff reductions, of the economic recovery of Europe and the participation of APPA in the recent conference in Buenos Aires to stimulate Latin American industry development.

"STARS" ON STARLIGHT ROOF—"The Open Industry Meeting," where APPA frankly tells the press and public what is on its collective mind, apparently has come to stay. Selected spokesmen for this industry in 1955, whose pictures appear on our cover, are Donald S. Leslie, president of APPA and of Hammermill Paper Co.; J. B. Faegre, president of M & O Paper Co.; Walter C. Shorter, vice president of Camp Mfg. Co., Inc., and J. D. Zellerbach, president of Crown-Z Corp. They will be heard at 2 p.m. meeting on the Waldorf's Starlight Roof Feb. 23.

Mr. Leslie will review the past year and express some calculated predictions, short and long range. His remarks will be cast against the background of 1954, either the second best production year or possibly the all-time high when final statistics are all compiled.

The other speakers will touch on matters which loom as significant. They will touch on industry enlightenment and education, certainly on the strides this industry has made in improved community relations, setting up standards and techniques which are unique in all industry, and also on national and international problems. Mr. Zellerbach's experiences abroad will no doubt influence his commentary. He also is chairman of the National Manpower Council, which made a recent report on skilled and technical worker needs.

"CORN-HOG" FARMER IS DINNER SPEAKER—Speaker at the annual dinner on Feb. 23 will be Allan B. Kline, a veteran responder to toasts, described as an inspirational speaker. He has just recently returned from one of many trips to Europe, made since his retirement in December after 7 years as president of the American Farm Bureau Federation.

Born in Nebraska in 1895, he was graduated from Iowa State College, and was for years a farmer in the "corn-hog" country in Benton county, Iowa. He and a son now operate a farm at Vinton, Iowa. The elder Kline has taken part in several international meetings as a U. S. farm expert.

Kenneth Beggs, who had charge of

the Stanford Research Institute study and report, which forecasts production and consumption of paper and wood products up to 1975, is going to be heard twice. He will not only address the APPA Materials Committee meeting, but also an American Pulpwood Association meeting.

Highlights of his report were published on p. 68, Oct. 1954 PULP & PAPER. It forecasts U. S. paper production of 46,600,000 tons in 1975, woodpulp production of 36,100,000 tons, and paper consumption of 52,900,000 tons. These figures compare with paper production of 26,458,000 in 1953, pulp production of 17,525,000 and paper consumption of 31,322,000.

It is interesting that an Institute of Paper Chemistry study projects a possible consumption of 58,000,000 by 1975 and President Eisenhower's Materials Policy Commission (Paley report) projects 51,700,000, which puts the Stanford report in the middle. The other two reports were a little higher and lower, also, in production forecasts. The Institute report anticipates waste paper demand and consumption will rise from the 30-35% of fiber source to 35-40%. The long-term Stanford forecast indicates waste paper use will decline slightly percentage-wise, and the Paley report looked for more use of straw and waste paper and other fibers than wood. The Stanford report is based on more wood being harvested scientifically, and it sees semi-chemical woodpulp displacing waste paper and vegetable fibers to a considerable extent.

Perhaps, many delegates at APPA and APA meetings will have their own opinions on these matters, but many others will be eager for the facts.

AUTOMATION–BY ALLAN HYER –A featured speaker at APPA's Materials Committee session will be Allan Hyer, vice president of The Black-Clawson Cos. A veteran of the machinery-building field, he will review that new magic of industry–automation–new systems for automatic control and operation of machinery, which means reducing costs, improving quality and uniformity, also safety, and eliminating hard, monotonous labor. Over the years, for Black-Clawson and Bagley & Sewall, now a B-C division, he has had important roles in many papermaking installations and during World War II he headed the WPB office in charge of machinery allocations.

AT PAPER WEEK

ALLAN HYER (left), Vice Pres. of Black-Clawson, will discuss automation–that magic word of industry in 1955–before APPA. VANCE EDWARDES (right), Palmer, N.Y., consultant and expert especially in sulfite processes, wins 1955 TAPPI Medal. His career has ranged from early days in Oregon City mill to Austria.

C. Cormicle, a Remington-Rand official, will talk at this meeting on inventory cataloging, and Dr. T. A. White, of National Starch, will discuss trends toward many new uses of adhesives in papermaking.

Gabriel Ticoulet, vice president of Crown Zellerbach, is featured speaker at the luncheon of SAPI. He is expected to plump for a sales effort keyed to a more competitive world.

COMMUNITY RELATIONS EXHIBIT–A surprise is promised by Donald M. Rochester, secretary, Community Relations Committee, APPA, when he makes his report to the Activities Committee.

An exhibit will depict progress in community relations development in the 11 organized areas. These are prepared by chairmen in each area and will have pre-selected themes on what each area is doing.

FEATURED SPEAKERS

ALLAN B. KLINE (left), past President of the American Farm Bureau Federation (Dec. 1947-Dec. 1954), a dynamic speaker, just back recently from one of many trips he has made to Europe, will be featured speaker at climactic annual APPA dinner in Grand Ballroom of Waldorf-Astoria, NYC, on Wed., Feb. 23.

A. KENNETH BEGGS (right), Stanford Research Institute, will address APA. He will interpret sensational Stanford report which forecasts a doubling of U.S. paper production by 1975–reaching 46,600,000 tons, and also U.S. paper consumption of 52,900,000 tons, as compared to only 31,000,000 now. For basic details of his talks see PULP & PAPER, Oct. 1954, page 68.

In addition, four "spectaculars" will be presented–an exhibit by American Forest History Foundation of Minnesota; an educational exhibit by The American Forests Products Industries; a cooperative exhibit prepared by Frank Heywood, Jr., chairman of National Community Relations Activities Committee, and a fourth exhibit by Southern Pulpwood Conservation Assn. depicting cooperation of small land owners on part of the paper industry.

TAPPI Program Will Reveal New Processes

One former Canadian will take over from another at the TAPPI annual meeting which begins at the Commodore hotel in New York Feb. 21, held concurrently with APPA. Karl O. Elderkin, for whom 1954 was a memorable year when it saw completion of the new Bowater, Tennessee, mill of which he is vice president and general manager, is slated to become the new TAPPI president, succeeding George Pringle, vice president in charge of white paper production, The Mead Corp.

Ward Harrison, production vice president of Riegel Paper Corp., has been slated to move up to vice president of TAPPI, putting him in line for the presidency two years hence. He is an Iowa State grad, got ph.d at the Institute in Appleton, worked with Riegel most of his career, but also with Ecusta and Crown Zellerbach.

Vance Edwardes, Palmer, N.Y., consultant, whose early career in the industry was in California and Oregon, but whose work has taken him to many countries, will be presented with the 1955 Gold Medal by Clark C. Heritage, Weyerhaeuser Timber's chief of new products development. Clarence Francis, director and former chairman of the board, General Foods Corp., will be luncheon speaker.

Elsewhere in this issue are pictures and description of the first Cleaner-Deculator installations in this industry. This new process will be presented at the technical sessions.

A new dry felting process for laying down and binding together fibers for making a wide variety of specialty papers from gossamer webs to heavy batts will be discussed by Bror E. Anderson, A. B. Dick Co., and James d'A. Clark, consulting engineer, Longview, Wash.

E. Schwandt, Goulds Pumps Inc., will discuss the proper application and maintenance of paper stock pumps.

The Sulzer system for water re-

moval will be explained by Robert Thomann, Sulzer Bros., Winter Thur, Switzerland. This system uses turboblowers instead of conventional volumetric pumps for aspirating air from paper machines and according to reports is made possible by development of effective separation of air and water mixture.

B-C FOUND REFINER IN FRANCE—In their search for a better stock refiner, the Black-Clawson people came across a unit in France which offered great possibilities. The findings after hundreds of tests and applications for the Shartle Alligator Refiner will be explained by H. P. (Pete) Espenmiller, senior research engineer, Black-Clawson Co.

Chlorine dioxide has enjoyed increased usage in the pulp industry but overemphasis on safety factors has held back larger scale use, according to a paper to be given by J. F. Haller and W. W. Northgraves, Mathieson Chemical Corp.

The need for information relative to mechnical work needed to separate fiber after wood has been cooked or treated in various ways will be stressed by J. E. Stone, Institute of Paper Chemistry, Appleton, Wis. Mr. Stone will also join with C. Forderreuther of the Institute to discuss the diffusion of sodium and ammonium-base neutral sulfite liquors into wood.

How effective is slime control chlorination in paper production? The answer, as evaluated by actual mill installations at National Paper Corp. of Penn., Ransom, Pa., will be given by B. J. Twisdale. He will compare chlorination with other systems and describe results of their set up.

TRY IT OUT PAPER WEEK

Visitors to Paper Week are invited to bring sample strips to run through this new Foxboro Sheet Weight Profiler for basis weight analysis. It will be exhibited at the Commodore, New York, Feb. 21-24. This Profiler is in a New England quality paper mill. Strip chart record provides accurate guide to slice adjustment.

TAPPI PRESIDENTS

KARL O. ELDERKIN (left), Vice Pres. and Gen. Mgr. of Bowaters Southern Paper Corp., Calhoun, Tenn., who is slated to succeed to the Presidency of TAPPI, now held by GEORGE PRINGLE (right), Vice Pres. in charge of White Paper, The Mead Corp., Chillicothe, O. Both are former Canadians.

MAGNETIC DRUM to CLARIFY WATER—A three-step process for rapid clarification of white water and a unique apparatus in the third step (using a magnetic drum) will be described by W. R. Stamen, Chemical Abstracts, Columbus, O.

Four avenues to solving pulping waste liquor problem according to a paper to be given by E. Farber and D. V. Robertson, Timber Engineering Co., are evaporation, precipitation, insolubilization and biological conversion.

The success of the new improved venturi scrubber, in connection with the Babcock & Wilcox recovery boiler, at Thilmany's kraft mill (the pioneer installation there was first described in PULP & PAPER) will be revealed by Paul West, pulp superintendent.

Nopco Chemical Co. has developed an "Acumeter," a versatile unit for metering and emulsifying a wide range of additives at the wet end of machines. This is to be discussed by John Ward.

E. D. Jones & Sons Co. will present information on a new and improved refiner.

The Institute is endeavoring to work up some data to present for the container field on score profiling.

The compact, power-saving Swedish-invented Ahlfors screen will be discussed. This is discussed in another article in this issue on the Oliver-Dorr companies merger.

EIGHT MEETINGS AT ONCE—There will be more simultaneous meetings this year—five meetings at one time will be commonplace, and up to eight meetings at once are on the TAPPI schedule in the Commodore meeting salons.

Insect repellant techniques will interest corrugated container technicians. The digester corrosion report (see PULP & PAPER Dec. 1954 issue for a review up to date) will be a highlight. The semi-chemical pulping sessions, as always, will draw big crowds. One of the most notable features of the program this year is the attention given to dissolving woodpulps, with Celanese, DuPont and Brown Co. and Madison Lab technicians participating. Also bleaching will be a star attraction, with industry interest so keen on upgrading pulps.

What Pulp Groups will Discuss in N.Y.

The big pulp story of 1955 according to Jim Ritchie, executive director, U.S. Pulp Producers Association, Inc., is the changed pattern of international trade. This will dominate the discussions of that association which holds its meetings on Sun. and Mon., Feb. 20 and 21.

Mr. Ritchie's report to the producers will forecast a good year in 1955. He foresees a general economic recovery and an increase in total market pulp demand over 1954.

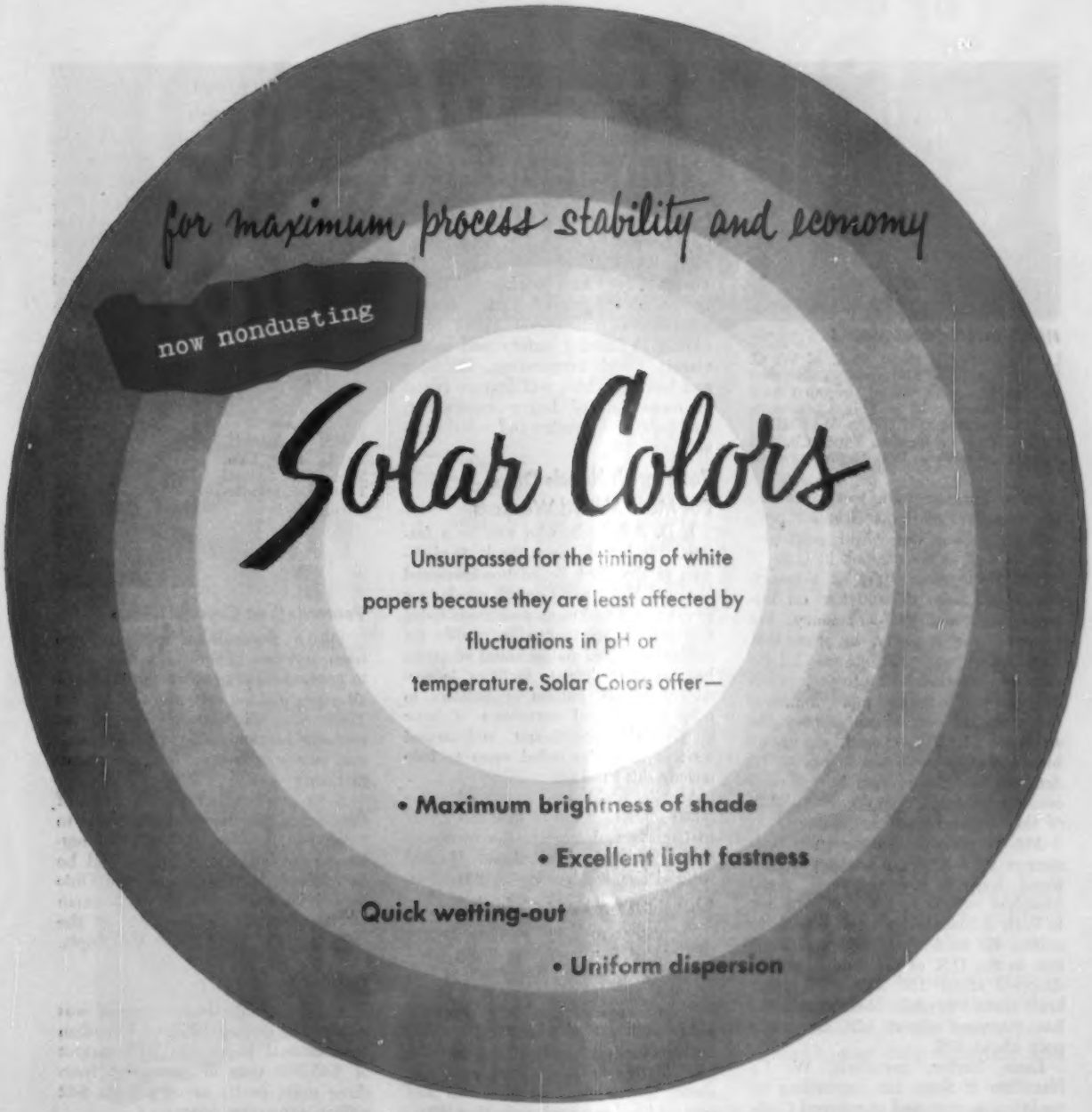
There's a good chance for consolidating the gain in the export market, he says and, reviewing the pulp picture in 1954 for PULP & PAPER, he says that there was some concern in view of the tremendous expansion in bleached market pulp supply and the possibility of an unbalanced market. This was avoided, he says, by changing the pattern of international trade and as a consequence this brought about a stability in bleached paper and board that might not have been realized, if these changes had not been effected.

With the pulp and paper economy of Europe back on the track, which he believes has been soundly based, Mr. Ritchie says, it looks as though there will be a very high level economy in Europe and North America and in all probability a higher level demand for pulp. Domestic market pulp was about 3% less than 1953 but a 30% increase in overseas trade more than offset this. There is room, says Mr. Ritchie, for improvement in market pulp demand, primarily in markets that were weak in 1954.

Consumers Will Hear Of New Pulp Trends

The emergence of North America as an important pulp exporter in 1954 will dominate Reed Porter's annual report to members of the Association of Pulp Consumers, Inc., during Paper Week. As executive secretary, he will predict that conditions will equal or surpass 1953's 2¾ million tons.

Mr. Porter says that the North American pulp industry is swinging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HEAD PULP CONSUMERS

LANE TAYLOR (left), Pres. of W. C. Hamilton & Sons, Miquon, Pa., also with mill at Plainwell, Mich., becomes new Pres. of Association of Pulp Consumers, Inc., succeeding CARLTON W. SMITH (right), Pres. of Moraine Paper Co. and American Envelope Co., Miamisburg, O.

from a domestic to a world market. His appraisal of demand and supply will encompass the world pulp picture as well as the outlook in U.S.

Mr. Porter sees 1954 as a transition stage from dependence on imports to overall self-sufficiency. He believes very strongly, he says, that these trends will continue and all indications are that in the future, North America will more and more dominate the world in bleached pulp supply. He estimates that 75% of world supply of bleached pulp now comes from North America and the reverse is true concerning unbleached pulp; about 75% of that coming from Scandinavia.

Mr. Porter will tell the pulp consumers he foresees no let-up in the trend toward bleached and semi-bleached sulfate and a declining use in both unbleached grades, especially sulfite. He says that 1954 consumption in the U.S. of unbleached sulfite dropped about 15% and unbleached kraft about 7%, while bleached sulfate has increased about 12% and soda pulp about 10%.

Lane Taylor, president, W. C. Hamilton & Sons, Inc., according to tradition, is expected to succeed Carlton W. Smith as president of the association.

APA Will Discuss Pulpwood Demand

Besides Dr. Kenneth Beggs's report on the Stanford Research Institute findings, the American Pulpwood Association will have other prominent speakers.

The challenge of how to meet this expected demand for pulpwood will be examined by R. E. Wertheimer, vice president, Longview Fibre Co., Dean R. J. Preston, N.C. State College of Forestry, and T. F. Wohlenberg, professor of industrial forestry, Yale School of Forestry. APA sessions are all "open."

Mr. Wertheimer will say that the demand can be met in part by closer utilization of trees cut; Dean Preston will urge increased use of hardwoods and Prof. Wohlenberg will emphasize more intensive forest management.

Fifty years of progress since the U.S. Forest Service was established will be reviewed by Dr. Richard E. McArdle, U.S. chief forester, U.S. Forest Service at a luncheon Feb. 23.

Annual sessions of APA technical committees will reveal latest techniques in training, safety and supervision; wood preparation, handling and hauling which will feature rental or ownership of heavy equipment; and industrial forestry and wood utilization.

Zellerbach Heads Drive For More Skilled Workers

J. D. Zellerbach, who will be a featured speaker at Paper Week, is chairman of the Ford Foundation-sponsored National Manpower Council which in a recent report said many youngsters today are denied opportunities to qualify for millions of skilled and technical vocations because of inadequate facilities in secondary schools, failures of industry to offer training and restrictions of labor unions. The government and armed services were also called upon to help remedy this situation.

Mr. Zellerbach has announced a national conference will be held this spring to improve and increase the supply of skilled workers and technicians. He said national security depends on this effort.

Question for Paper Week:

Production and consumption growth charts—how much do they mean when calculated in dollars? How much of it is inflation?

The Commerce Department frequently points with pride to what it calls "Gross National Product"—$108 billions in 1919, $365 billions in 1953. This appears to show "consumption" of all goods and services have increased more than 300%.

Two Industry Men Die in Plane Crash

Two industry men lost their lives when their TWA Martin Skyliner collided in midair with a private DC-3, just after the commercial plane took off from Cincinnati for Cleveland Jan. 12. They were H. N. Ronney, assistant to President William P. Davis, Potlatch Forests Inc., Lewiston, Ida., and Stanley Wharton, official of E. B. Eddy Co., Ottawa.

JOHN E. BURDSALL, new Gen. Supt. for Crystal Tissue Co., Middletown, O.

Promoted at Crystal Tissue

John E. Burdsall has been promoted from assistant general superintendent to general superintendent in charge of all paper making operations of Crystal Tissue Co., Middletown, Ohio, it was recently announced by H. H. Harrison, vice-president in charge of manufacturing.

After graduation from the Univ. of Cincinnati, Mr. Burdsall first came to Crystal in January 1934. He is a registered professional engineer and he has served as chairman of the Ohio Section of TAPPI as well as chairman of the Miami Valley Div. of the American Pulp and Paper Mill Supts.

Record for C.I.P.

An all-time production record was established during 1954 by Canadian International Paper Co. with output of 845,000 tons of newsprint from three mills, partly as result of a $42 million expansion program.

LONG SERVICE WITH NEENAH PAPER CO.

Three widely known 35-year men are shown here being honored at a recent Neenah Paper Co. employes' celebration (l to r): FRED LEECH, Toastmaster; I. J. STAFFORD, Vice Pres. for Mfg., who made awards; EMIL KUEHL, LEO SCHUBART, President, and ED MELLENTHIN, who received awards (for first two, gold watches, for Ed, equivalent in bonds). There were 98 others who got diamond pins for 25 years; 52 who got silver pins or tie bars for 15 years. Guests included 17 retired employes.

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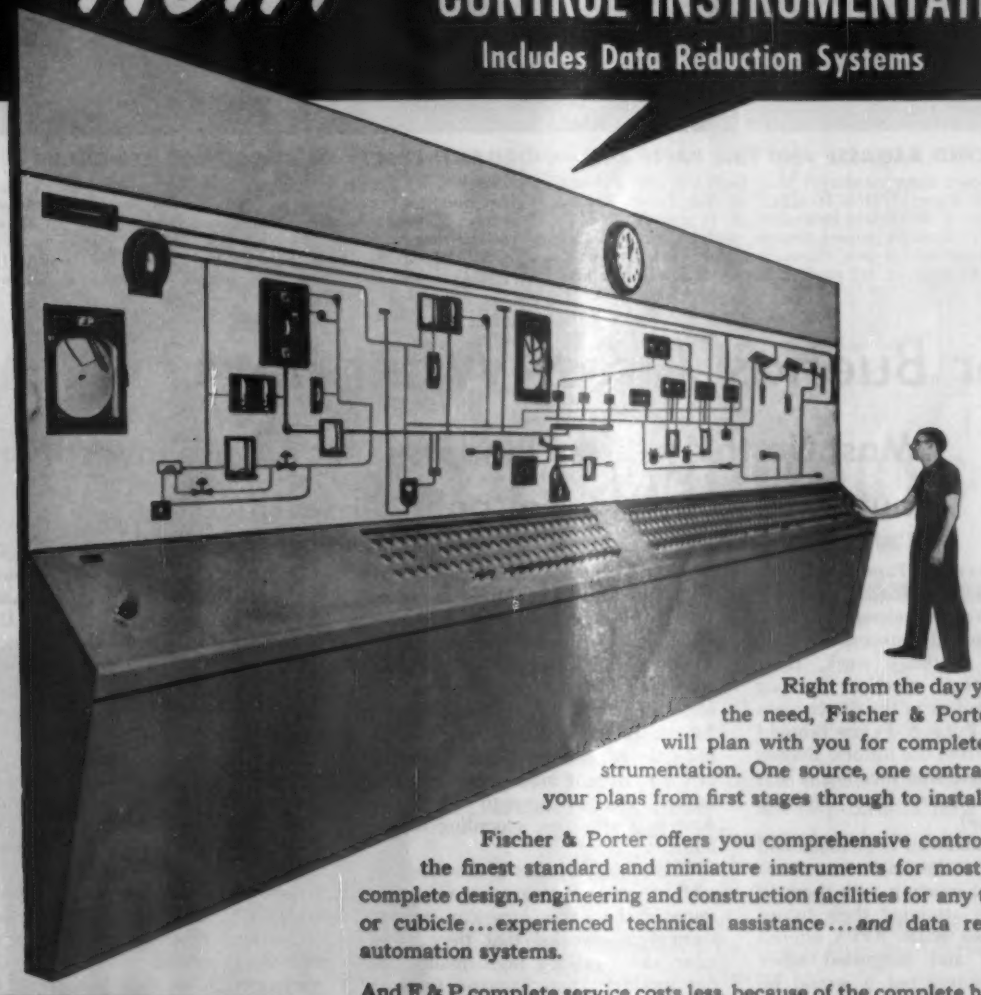

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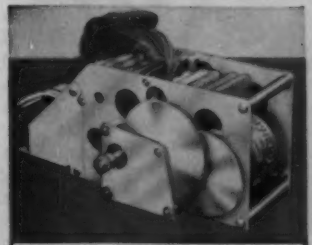

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NEW BLEACHED BAGASSE AND FINE PAPER MILL—MORGANTI FAMILY OF BRAZIL REALIZES DREAM

These well-known sugar producers have built the new Fabrica de Cellulosa e Papel "PIRACICABA," in Sao Paulo, Brazil. Parent company is Refinadora Paulista S. A. It utilizes the continuous Celdecor-Pomilio pulping process, with chlorination and bleaching sections, and a new electrochemical plant. One of 2 machines is a 40 tons per day modern Bagley & Sewall machine supplied by Castle & Overton, New York. Mill burns eucalyptus wood for power (bagasse formerly was burned). These views show: Sugar cane bagasse being stored and baled; an air view of the new mill; a scene when first bleached pulp was made—DR. ASTRUBALI at left; H. BRAUN, Mill Supt., second from left. Cellulose Dev. Corp. Ltd. supplied or specified equipment.

After Buenos Aires—What next?

Most North American leaders favor private investment but one sees danger of political sacrifice

• As the American Paper and Pulp Association is preparing to gather in New York's Waldorf salons and rooms for its 78th annual convention during Washington's Birthday week, there were conflicting reactions among many of its leaders to the direct news report which PULP & PAPER brought to its readers from the historic Buenos Aires Latin American meeting of Experts of the Pulp and Paper Industry (see Dec. issue).

The APPA made an unqualified and specific offer to the Latin Americans to hold a joint meeting with them to assist them in attaining their future pulp and paper goals. APPA offered technical aid and suggested other assistance, pointing out it would be similar to the support given to Canada in building up its No. 1 industry—pulp and paper—by individual American investors and industrial leaders.

"Somebody is going to build the mills to meet the increasing pulp and paper demands of 160,000,000 Latin Americans, Europeans or North Americans, and we had better think it over," the president of one United States paper company told PULP & PAPER.

"Your report roused my curiosity and I will pay more attention to pulp and paper in that area of the world from now on," said another. "Our company up to now has been plenty busy here at home and has a great deal more to accomplish in our own country."

A company chairman feared "private investments might be sacrificed to a political program," so he favored government loans, as better of two evils (in his opinion). But most executives felt private capital ought to build the mills in Latin America. International public agencies, in thinking only in terms of public financing and government loans, may have retarded industry growth in South American countries, according to one industry leader.

One of the surprises of the meeting, said a returned engineer, was that some of the Latin American experts themselves revealed that they know more about making high quality paper products from bagasse, such as tissue, etc., than outsiders who went to B.A. to talk about the subject may have suspected. Technically, Celulosa Argentina, Klabin of Brazil and one or two other firms revealed to delegates they are far advanced in some of their work.

There were 9 delegates from Europe, mostly bankers and promoters, 15 from Canada and the U.S.A., one from Australia, and the remaining 64 were Latin Americans.

CONFERENCE IN NEW ORLEANS—Late in February, 150 to 200 leading Latin American businessmen will join with about 200 American businessmen in a meeting in New Orleans to discuss schemes to develop Latin America with private capital. President Eisenhower endorsed the meeting, and assigned officials to assist the Chamber of Commerce of U.S. and the Investment Bankers Association of America to sponsor the meeting. Latin Americans will come to New Orleans with specific plans for enterprises in which they would invite American private investment.

It is recalled the APPA offered at Buenos Aires to sponsor a similar joint meeting in the pulp and paper field, and especially to give technical and other assistance.

Another prominent private executive in U.S. industry had this to say:

"In my judgment there will be no difficulty in getting money for the development of the pulp and paper industry in South America as soon as the climate is favorable. As Ted Tinker (executive secretary of APPA) pointed out, plenty of American money has gone and is going into Canada.

"As soon as the South American countries can provide a stabilization of government comparable with that of the north, then industry will move ahead. Until they do that, it will not expand materially except on a government hand-out basis."

Since his return from B.A., Mr. Tinker expressed regret that the United Nations FAO and the FOA headed by Harold Stassen seemed to think only in terms of public financing, which he felt had contributed to delaying the pulp and paper indus-

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tries south of the border.

He concurred with PULP & PAPER's report that the building of mills in Latin America will inevitably develop a tremendous market for North American pulp mills, which will be called upon to supply some of the bleached and quality pulps. Even pulp mills now existing in South America, in the bagasse field and other pulp makers, also buy considerable imported pulp for part of their paper furnish.

THE GLOOMY VIEWPOINT—A veteran top executive of a big U.S. paper firm said he was frankly "leery" of any plant development in Latin America. He said the situation seems worse than when U.S. was more involved in world problems, and that he had not seen much evidence of cooperation from the U.S. State Department. He feared private interest might be sacrificed for some political program. In his opinion, government loans to people of those countries would be much better.

"I'm at a loss to know just what kind of an annual report the U.S. concerns could make to their stockholders and translate their South American investments into U.S. dollars."

He agrees "something will be done in Latin America," but predicts U.S. will lose export markets and it will create more competition in the world market, particularly for pulp.

Many of the things Americans are doing today, he feared, are eventually going to result in detriment to the U.S. industry.

Another American major paper company president, however, took the stand that funds should come from private interests and should not be advanced by the Treasury of the U.S. where the bill will be paid by the American taxpayer.

One major American pulp company spokesman said their firm, as a matter of agreed policy, was unalterably opposed to any type of program that seeks financial aid from any branch of the U.S. Government or any organization that the U.S. Government supports. Private industry should be assured the first opportunities to develop new enterprises, he asserted, but in Latin America he thought there is "little more than smoke from a small fire." Extreme nationalism, shortage of fuels and other raw materials are obstacles there, he said. He suggested interested parties should "slow down their enthusiasm to a sound sensible basis," or over-development may bring troubles.

"A certain amount of forward planning is necessary, but it is generally the case that the U.S.A. steps off on the wrong foot and gets its big nose in places where it does not belong," the spokesman averred.

Another company's spokesman said private investors should be cautious because of unstable financial and political conditions in many of the countries. Growth will not be as rapid as predicted unless these countries develop a more favorable business climate.

In an interview with a leading official of another big paper company, whose special interest is in Latin American affairs, the fact that the B.A. meeting took place at all was described as an accomplishment in itself. But there is still "too much groping and indefiniteness" and the real potentials must be brought into focus.

Some small Latin American nations, like some states of the U.S., will do better buying their paper, he said. Even where wood or other fiber, water, fuel and labor are available, a sound economy and a product that will compete on a world basis are required.

In Brazil, he said, Deltec and Interamericana have done well in raising local private capital for sound projects. He said there will be private capital available for sound projects.

At least two major U.S. paper firms had their own representatives at the meeting.

CARLOS BENKO—"I'm sorry for anyone interested in the Latin American industry, if he missed Buenos Aires."

A Brazilian Gives Views on Buenos Aires

Carlos Benko, a subscriber to PULP & PAPER and Hungarian-born manager of a Sao Paulo, Brazil 3-machine mill which also makes a small quantity of wood pulp, was a session leader at the Buenos Aires conference. His little mill makes writing, printing and wrapping paper, and he is also the publisher of a paper magazine, *O Papel*.

"This was one of the most serious paper meetings I ever attended, and I was very pleased to observe how frank were the discussions," he said. "There were very complete discussions on financial as well as technical and economic phases. Anyone having an interest in development of the industry in Latin America should have been there."

Mr. Benko said all delegates made the interest of the ultimate consumers their "first target" and thus recognized "the importance of paper in man's life." He predicted more use of bagasse and eucalyptus for pulp in Brazil.

"Paper is unique for it is a product consumed by men before born and after dying, as well as through their entire lives," he commented.

THE CANADIAN VIEWPOINT—From a leading pulp and paper company in Canada, which markets pulp as well as paper, came this view: Latin American countries offer near-term markets as an outlet for North American pulps. Mr. Tinker's viewpoint seems to be the logical one. Private enterprise and capital should be encouraged and all government agencies should help by creating a favorable and receptive climate. There undoubtedly will be pulp and paper mills built, though major obstacles may require solution. There may be substantial amounts of private American capital finding its way into a Latin American pulp and paper industry.

WHAT MACHINE BUILDERS SAY—United States machinery builders are generally convinced there is a good market developing in South America for their products, but they have their troubles, too. The Export-Import Bank's strict attitude toward proposals to guarantee payments has been discouraging to them. And long terms promoted by the Latin American governments—5 to 8 years in Argentina, for example—have caused uneasiness about eventually getting paid. British and German governments have been more cooperative in guaranteeing payment for machinery sales in Europe. There are signs the Export-Import Bank is relaxing its attitude.

Price-wise, Americans are up against rugged European competition, but other factors, such as engineering services, shipping, etc., may favor the U.S. supplier.

Regardless of the outcome, things are already happening. Grace & Co. is greatly expanding its paper mill in Peru, which makes bagasse and buys woodpulp. West Virginia Pulp & Paper is rebuilding a mill it bought in Brazil. Parsons & Whittemore Co. is building a Brazil mill and planning others. Sandwell & Co. Ltd. is retained by one group in Argentina and another in Brazil, both for pulp and paper projects. Italian, British and French interests are busy, too. And North American manufacturers of quality pulps are reporting more business, and are optimistic as regards future pulp demand for the new mills.

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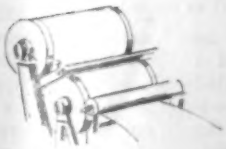

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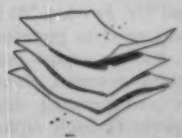

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PULP & PAPER

What's New in Canada's No. 1 Industry

EXPANSION BY RAYONIER—As a sequel to Rayonier's acquisition of control of Alaska Pine & Cellulose, Ltd., in British Columbia, Clyde B. Morgan, Rayonier president and newly elected chairman of Alaska Pine, announces that about $8 million will be spent in expansion of the latter company's Port Alice, B.C., mill and that a silvichemical manufacturing unit will be established near Vancouver to produce Rayflo, a new bark extract sold to the oil industry as a mud dispersant.

Mr. Morgan's announcement was made during his recent visit to Alaska Pine headquarters in Vancouver, where he and other top executives of Rayonier conferred with Walter Koerner, president of Alaska Pine, and Douglas W. Ambridge, president of Abitibi Power & Paper Co., Toronto, who continues as a director under the new Rayonier regime.

Rayonier Inc. has purchased an 80% interest in Alaska Pine, and a check for $20,000,000 was presented to Mr. Koerner during the Vancouver meeting. Other members of the new board are James T. Sheehy, Rayonier executive vice president; Russell F. Erickson, Rayonier v.p. in charge of engineering; Paul E. Roberts, vice president and general manager of Alaska Pine, and Leon J. Ladner, Vancouver lawyer.

Details of the expansion at Port Alice have not been disclosed, but it is understood that the company plans virtually to double capacity, as was first reported in PULP & PAPER some months ago when the $7,000,000 modernization program was completed there—(P&P May 1954).

"The Rayflo plant will be the first of its kind in Canada. Rayonier also produces Rayflo at one of its Washington mills. Unlike quebracho, which has to be imported from South America, Rayflo requires less chemical additives to be effective in most field conditions. Alaska Pine has sufficient hemlock bark to supply large tonnages for drilling mud industries in Canadian oil fields as well as South America, the Middle East and in all likelihood the U.S.," said Mr. Morgan.

LARGEST BOARD MACHINE IN WORLD—While Rayonier was planning big things on the Pacific coast, Canadian International Paper Co. was preparing a $15,000,000 expansion program at the LaTuque, Que., bleached sulfate mill which it purchased recently from Brown Corp.

CIP's program calls for installation of a new 276-inch Fourdrinier machine to manufacture kraft liner board for corrugated shipping containers. It will be the largest board machine in the world, according to President Vernon E. Johnson, who says that it is planned also to expand the present pulp mill at LaTuque, increase wood handling facilities and the capacity of the chemical recovery system, install a new system boiler to produce 200,000 pph. of steam, and add new digesters.

The CIP president adds that when the project is completed 200 more men will be employed at the mill, while an additional 1,000 will be required for wood operations.

NEW INQUIRY IN B.C. TIMBER—British Columbia will embark on another full-scale inquiry into its forest industry following Chief Justice Gordon Sloan's agreement to accept the investigator's role proposed by the provincial government. Sloan made a similar survey nearly ten years ago and made recommendations which subsequently were enacted into law.

One of them was the forest management license plan under which all recent pulp mill projects have been developed. Several companies, notably Kitimat Pulp & Paper Co., B.C. Forest Products and Celgar Development, have management licenses pending and, when granted, they plan to proceed with mill construction.

A BOUQUET FOR PORT ALBERNI—It isn't often that a pulp mill manager receives a letter from a community commending the company's success in combating black liquor and digester gas fumes. James Petrie of the Port Alberni unbleached sulfate mill of MacMillan & Bloedel had that rare experience a few days ago. The letter was from the Port Alberni chamber of commerce, which reported 80% of the mill odor had been eliminated. The mill installed chemical treatment facilities more than a year ago, and similar action was taken later by the company's Harmac bleached sulfate mill.

INCREASES PULP OUTPUT—Woodpulp production in Canada in 1954 was about 9,500,000 tons, compared with 8,900,000 tons the previous year, an increase of 6¾%. Gross value of both paper and pulp production was approximately equal to 1951's all-time high of $1,200,000,000, according to a year-end review of Robert M. Fowler, president of the Canadian Pulp and Paper Association.

SETTLING BIG DEAL
The man who pays, in this case CLYDE MORGAN (left below), President of Rayonier, Inc., might look happier than the one who receives, LEON KOERNER, President of Alaska Pine & Cellulose, but both expect to benefit substantially from the deal which resulted in the transfer of an 80% interest in Alaska Pine to Rayonier for $20,000,000. This PULP & PAPER picture was taken in Vancouver, B.C., where the transaction was finalized. Standing are (l to r): DOUGLAS W. AMBRIDGE, president of Abitibi Power & Paper Co., Toronto, and JAMES T. SHEEHY, executive vice president of Rayonier.

"Both at home and abroad the demand for pulp increased during the year," reported Mr. Fowler. "At home, more pulp was used in papermaking at the mills, and in export markets, particularly those overseas, there was a satisfactory and growing demand.

"While exports of high alpha and unbleached sulfite pulps remained at about the 1953 levels, exports of all other grades increases. Export shipments of bleached chemical grades were about 23% higher than in 1953. Total exports of all pulp will thus run to about 2,164,000 tons, compared with 1,955,549 tons in 1953 and 2,243,307 tons in 1951, the all-time high record year.

"All in all, the mills manufacturing pulp for export have enjoyed a reasonably good year and face the future in sound position. As pulp manufactured for export accounts for 20% of the output of all the mills, the demand in export markets has had a direct and satisfactory bearing on the industry as a whole."

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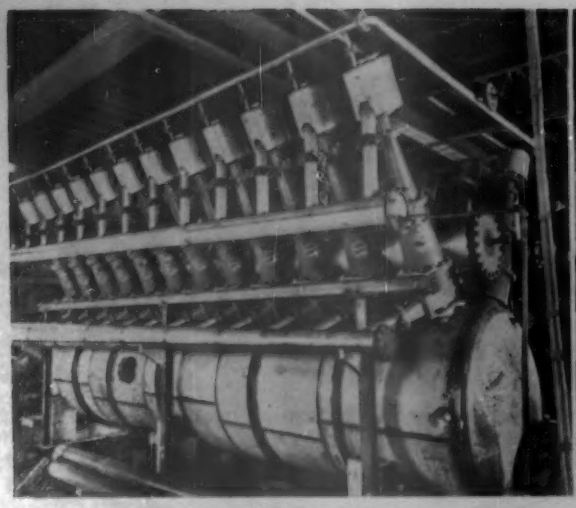


FIG. 1—DECULATOR-CLEANER RECEIVER ASSEMBLY ON A SOUTHERN FOOD BOARD MACHINE.

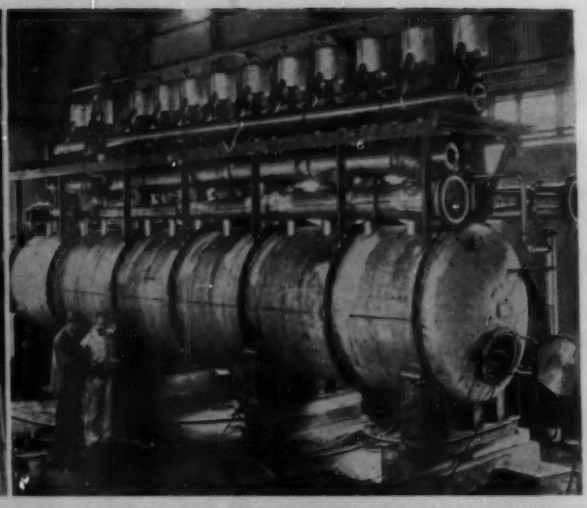


FIG. 2—DECULATOR-CLEANER RECEIVER ASSEMBLY IN LONGVIEW FIBRE CO., LONGVIEW, WASH.

New Process Removes Air and Dirt

Deculator and Bauer Cleaners combined in kraft mills in South and West. Savings shown in power and costs.

● Here is a "preview" of a new process for the simultaneous removal of air and dirt and other foreign matter from machine stock.

Because there are already important installations of the new process in large kraft mills in the United States, with data on results available, field editors of PULP & PAPER were able to bring its readers this "advance report."

First news of the Deculator was published in PULP & PAPER, Nov. 1950, and this magazine carried an exclusive report on how it was developed by Rotareaed Corp. and engineers in Canadian International Paper Co. and later in U.S. mills in the Feb. 1951 issue.

First news of a similarly revolutionary process, the development of the Centri-Cleaners (now Bauer Cleaners) in Hammermill and Howard Smith mills was unveiled to this industry in PULP & PAPER's Sept. 1952 issue.

A new process known as the Deculator-Cleaner, for the simultaneous removal of air, gases, dirt, shives and other foreign matter, was recently put into operation on a Fourdrinier bleached kraft food board machine in the South. Additional installations are being made on other machines producing grades such as kraft board and paper, bleached kraft, tissue and specialty papers.

Results from the Deculator-Cleaner installations on bleached kraft food board are reported to be excellent. On all grades of food paper and board since startup there have been definite improvements in sheet formation. Stock drainage rate increased, enabling use of more water in the sheet. Dirt removal efficiency of the combination is reported very good and elimination of fine abrasive dirt from the furnish gave a wire life of 22 days on the first wire after startup compared to an expectancy of 10 to 14 days.

The Deculator-Cleaner process combines the Deculator process with a battery of Bauer Cleaners (formerly named Centri-Cleaners) and is available in a variety of sizes, each designed to meet needs of the individual paper machine. This combination of the Deculator with the centrifugal type cleaners was developed over a two-year period by Rotareaed Corp. working in close cooperation with Bauer Bros. Co. and prominent paper industry engineers and personnel. By combining Deculator equipment and Bauer Cleaners into one packaged unit, several advantages are reported as achieved in actual operations. Among these are:

1—A substantial saving in power.
2—A reduction in overall cost of piping and installation.
3—A reduction in space required.
4—A simplified control of the flow of deaerated and cleaned stock to the paper machine.

The Deculator process deaerates by spraying and impinging dilute paper stock into a high vacuum receiver from which the stock is pumped to the headbox. It has been determined by numerous tests that the accepted stock emerging from the Bauer Cleaners, when discharging freely, sprays in a manner comparable to the spray from standard Deculator nozzles. Thus, by mounting the Cleaners directly on the Deculator receiver, it is possible to eliminate the Deculator spray nozzles entirely. This simplifies design, reduces cost, and saves considerable power.

Power saving is credited to the fact that the high vacuum in the Deculator receiver acts to pull the stock through the Bauer Cleaner and therefore the input pressure normally required on the cleaner inlet can be reduced by an amount equivalent to the pull of the vacuum. This reduction in feed pressure reduces the power required to pump the stock through the combination unit to the

extent that the Deculator-Cleaner process normally requires no more power than that required for cleaning alone.

A feature of this development concerns the location of the Cleaner on the Deculator receiver. Centrifugal forces within the Bauer Cleaner are over a thousand times that of gravity. Because of this the cleaner will function equally as well when mounted in any position. Therefore the cleaners on a typical Deculator-Cleaner receiver assembly can be mounted on top of the receiver with the accepted stock being discharged and sprayed in a downward direction, and the rejects from the conical tip of the Cleaner sprayed upward into collecting chambers.

HOW USED IN SOUTH—A photograph of a typical Deculator-Cleaner receiver assembly as applied to a large kraft food board machine in Southern U.S. is shown in *Fig. 1*. On such an installation paper stock and white water from the wire pit are mixed at the suction of the No. 1 fan pump which feeds the Deculator-Cleaner assembly. An automatic air-operated control valve in the line between No. 1 pump and Deculator-Cleaner assembly maintains the liquid level within the Deculator receiver constant at all times, and also maintains a constant input feed pressure on the Bauer Cleaners. As can be seen in the photograph the cleaners are mounted on the receiver at an angle to the vertical. The accepts from the cleaners spray directly against impingement plates within the Deculator receiver. The cleaned stock is deaerated within the receiver and the cleaned and deaerated stock is then pumped by the No. 2 fan pump to the paper machine headbox. Rejected dirt and shives are discharged through orifices at the apex end of the Cleaner into collecting chambers.

Dilution white water is added to the header and the diluted rejects then flow by gravity to a secondary Cleaner pump which feeds the customary secondary bank of Bauer Cleaners mounted vertically upright in the usual manner. The accepts from the secondary Cleaners are returned to the suction of the No. 1 fan pump where they are recirculated back through the primary Cleaners and Deculator receiver. The rejects from the secondary Cleaners are discharged through white water educators to the suction of a No. 4 fan pump feeding the tertiary Bauer Cleaner. The accepts from the tertiary cleaner may be combined with the accepts from the secondary and returned to the suction of the No. 1 pump, or they may be returned to the suction of the secondary Cleaner pump, depending upon the type of furnish and the degree of cleaning desired.

The better drainage afforded by the deaerated stock permits headbox consistencies much closer to the optimum for good centrifugal cleaning, particularly on the heavier grades. This, together with the carefully engineered secondary and tertiary stages of fiber recovery, resulted in the rejection of only a few hundred pounds of very dirty pulp from a total machine production of hundreds of tons.

In order to maintain a constant flow through the Deculator-Cleaner assembly at all times, irrespective of the gallonage required to the headbox, a portion of the flow through the unit is constantly recirculated from the discharge of the No. 2 fan pump back to the suction of the No. 1 pump. In this way a constant feed pressure is always present on the Bauer Cleaners for maximum efficiency. Deaeration is also maintained at maximum efficiency by utilizing the greatest degree of spraying and impinging within the Deculator receiver. Stock velocities throughout the piping are also constant which reduces the danger of stock hangup, slime formation and flocculation.

On many machines running a wide range of weights and grades, the size of the stock piping to the headbox is often selected to give optimum velocities at the highest flow rates which results in flocculation and dead stock on grades where the flow is considerably less than maximum. The use of stock recirculation from this piping back through the Deculator-Cleaner assembly makes it possible to maintain constant flow through this piping from the highest down to the lowest flow rates. On operating installations this has made it possible to eliminate flocculation and dead stock without changes in existing piping.

INSTALLATION IN FAR WEST—On some paper machines it may be desirable to clean the furnish at a higher consistency than the minimum consistency of the headbox furnish. On such machines the thick stock is diluted to the optimum consistency for most efficient cleaning and pumped through the Bauer Cleaners mounted directly on the receiver. An additional quantity of white water is introduced through standard Deculator spray nozzles into the receiver, using the vacuum within the receiver to lift the white water from the wire pit.

On such installations the spray nozzles on the receiver are spaced between adjacent Cleaners to provide thorough mixing of white water and cleaned stock in the receiver. An example of this type of Deculator-Cleaner assembly in Longview Fibre Co., Longview, Wash., is shown in photograph in *Fig. 2*. This is in a mill making unbleached kraft paper and board. An additional feature of this unit is that the furnish to both primary and secondary headboxes on the machine is cleaned and deaerated in one Deculator-Cleaner assembly. Each section of the assembly has provision for handling the diluted furnish through the Bauer Cleaners with the additional quantity of white water being added through spray nozzles in the receiver to maintain the correct headbox consistency. The flows to the primary and secondary headboxes are independently controlled. A common vacuum system is used to remove the air and gasses from both primary and secondary sections.

For convenience in installation, the Bauer Cleaners on this unit are mounted vertically on top of the receiver instead of at a 30° angle to the vertical as on the unit shown in *Fig. 1*. Rejects are handled in the same manner with secondary and tertiary Cleaners mounted separately.

The same ability to clean the furnish at a consistency higher than minimum consistency of the headbox furnish was incorporated in the design of a Deculator-Cleaner installation now being fabricated for a new 217 in. wide Yankee tissue machine designed for speeds up to 2500 fpm. As headbox consistency on this machine will run as low as 0.2% the primary stage cleaning will be accomplished at higher consistencies, thus reducing the required number of cleaners. A fairly large number af standard Deculator spray nozzles are consequently used to deaerate the large volumes of white water necessary for dilution.

The design of the Deculator-Cleaner process for machines making carbonizing paper, glassine and grease proof and various specialty papers is quite similar to the bleached kraft food board machine installation previously described except for overall size of the equipment. Cleaners in a smaller size range may be used for high percentage dirt removal on these furnishes. Total volume of headbox furnish is also usually less than that found on large machines, which reduces considerable the size of the assembly and other components of the system. The same advantages also apply regarding saving in power, reduction in cost of piping and installation, reduction in space required and simplified control of the flow of deaerated and cleaned stock to the machine.

(L to r) STANTON W. MEAD, President of Consolidated Water Power & Paper Co., new Sulfite Research League President; J. M. CONWAY, President of Charmin Paper Mills, who requested retirement from League Presidency after serving 15 years; JOHN C. WOLLWAGE, Director of Tech. Research, Kimberly-Clark, new Chairman of League Technical Committee, and HENRY A. ROTHCHILD, K-C Asst. to Vice Pres. of Mfg., a new Trustee.

New Era Begins for Sulfite League

An era in a successful history of cooperative research by 14 Wisconsin and Michigan sulfite mills has come to an end, and a new one begins as Stanton W. Mead, president of Consolidated Water Power & Paper Co., succeeded Joe M. Conway, president of Charmin Paper Mills, as head of the 15-year-old Sulfite Pulp Mfrs. Research League, Inc.

In 1939, Mr. Conway organized the League in an effort to establish an orderly procedure in attempts to solve the crucial stream problems of sulfite mills and find economic uses for sulfite effluent. He steadfastly hewed to one cardinal principle—"our problems can only be successfully solved through science and not politics," as he told PULP & PAPER. The League won Wisconsin officialdom's approval and cooperation for its programs, thus setting a shining example of teamwork for chemical pulping industries in other states.

Election of Mr. Mead as its second president is a tribute to the cooperative pioneering work done by his company, especially in the field of evaporating and burning of the waste liquor, and more recently in developing new marketable products. The Consolidated Interlake mill also operated the trickling filter and Rosenblad evaporator pilot plants for benefit of all the member mills.

Two new trustees of the League were elected. Gilbert Heath, new manager of the Scott mill at Oconto Falls, succeeded Forrest Brainerd, who was called back to Scott headquarters as special assistant to the executive vice president, Raymond C. Mateer, in coordinating production of three recently merged companies into the Scott organization. With retirement of Ernst Mahler of Kimberly-Clark, Henry A. Rothchild, K-C's assistant to its v.p. of manufacturing, became a trustee, and John Wollwage, head of technical research for K-C, succeeded Mr. Rothchild as chairman of the League's technical committee.

Re-elected League officers: Vice pres., Folke Becker, chairman of Rhinelander Paper; treasurer, Cola Parker, chairman of K-C; secretary, John G. Strange, vice pres. of the Institute of Paper Chemistry. Other League trustees, besides new officers, are E. A. Meyer, president of Badger Paper Mills, George N. Carleton, vice pres., Detroit Division of Scott Paper; R. H. Sears, mill mgr., Marinette Paper; Leonard Kuehl, v. p. and gen. mgr., Kansas City Star Co.'s Flambeau Paper Division; Allen Abrams, vice pres. of Marathon, and J. E. Alexander, president of Nekoosa-Edwards.

Where New Coating Processes are Developed

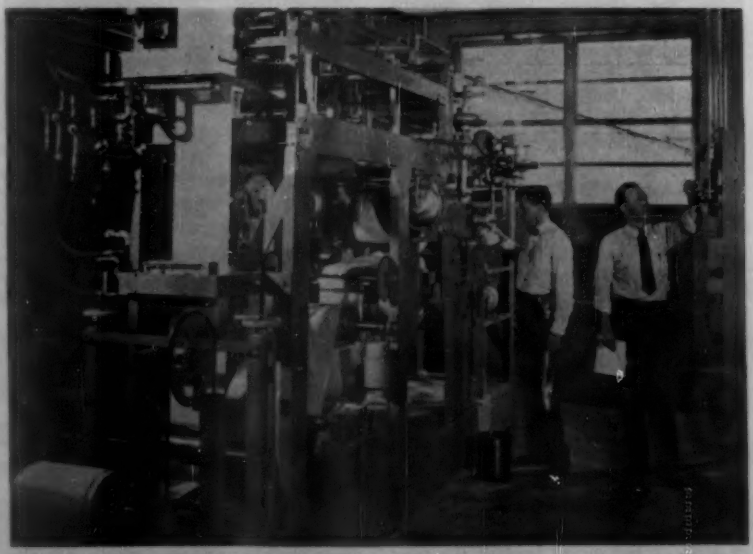
A successful and "trouble-free" piece of equipment for coating experiments is being used by Marathon Corp. in its Central Research Division at Rothschild, Wis. This coating machine is its own design, incorporating conventional means of coating and size press application.

It is constructed "erector set" fashion enabling Marathon researchers to incorporate new ideas on coating methods with minimum difficulty. The machine was built by Wheeler Roll Co., Kalamazoo, Mich.

Each of the powered rolls are driven independently by a Louis Allis Ajusto-Spede motor. These individual drives are integrated through an electronic control system to give a synchronized variable speed operating range of 100 to 1000 fpm. for the machine. The individual roll speeds and overall machine speed are controlled by push button control.

Drying is accomplished by one chrome-plated drying drum and two banks of two Red Ray dryers located on opposite sides of the paper web. The drying drum is located immediately after the coating head. In this manner the wet web is first contacted for drying by the drying drum as in mill operation on a paper machine.

We have found the operation of this coating machine to be very satisfactory in the several-month period, said J. Richter Salveson, Central Research director.



WHERE MARATHON TESTS NEW COATINGS, SIZE PRESS TREATMENTS

Wheeler Roll Co., Kalamazoo, Mich., built this special coating machine for Marathon Corp., for use in its Central Research Division at Rothschild, Wis. Powered rolls are driven independently by Louis Allis Ajusto-Spede motors and two banks of Red Ray dryers are used. BILL BEAN (left) and JIM ADAMS are shown here getting "bugs" out of a new process.

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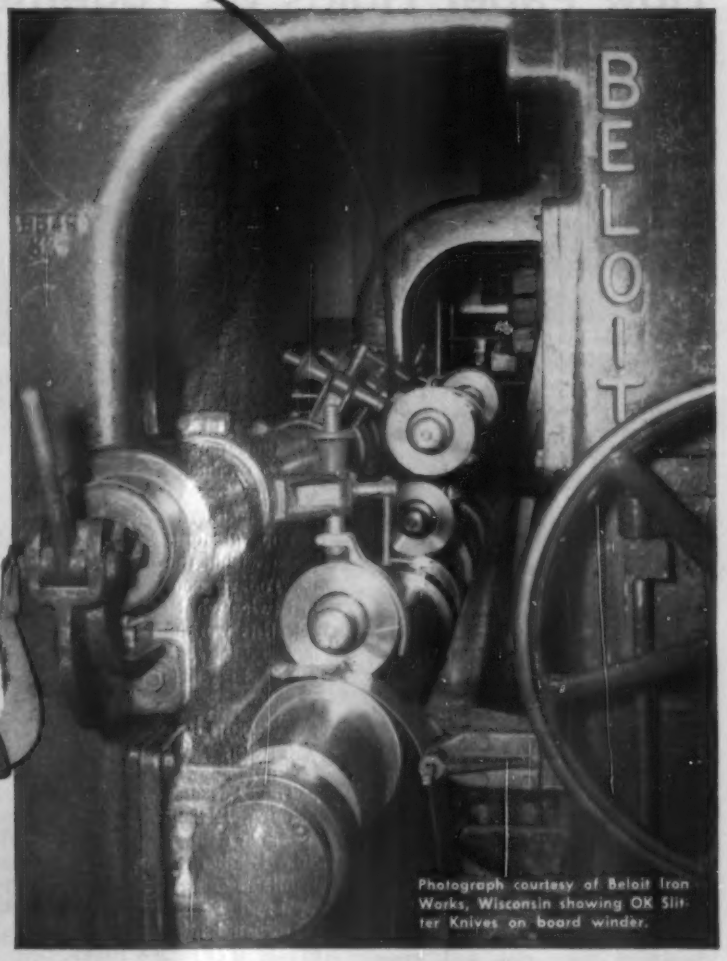
OK

let'er go!



Photograph courtesy of Beloit Iron Works, Wisconsin showing OK Slitter Knives on board winder.

cut costs with OK SLITTER KNIVES

In Company after Company building machines for paper manufacturers or converters, OK Slitter Knives are first choice. Made of the finest tool steel, scientifically heat treated—ground and finished to tolerances of ± .001 if required. You can enjoy tremendous savings in production, because Ohio Knives give longer runs, require less regrinding, and deliver precision work even on the toughest jobs.

Complete lines available in all sizes, or designed to your specifications. Made from Nickel Carbon Alloy, Hi-Speed, Hi-Carbon, Hi-Chrome and Stainless.

For complete information write the Ohio Knife Co., Cincinnati, Ohio, Dept. 37-F.

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THE OHIO KNIFE CO.

CINCINNATI 23, OHIO

Manufacturers of OK SLITTER KNIVES, CHIPPERS, TRIMMERS, REVOLVING CUTTERS, etc.

How Paper Holds Us Together

By Charles Sumner Barton
President, Rice Barton Corp.

When we say that our civilization is held together by paper, are we indulging in an absurdity or are we stating a simple fact?

In a talk to members of our own organization, at the annual banquet of our 1837 Club, attended by about 450 employees and their wives, I said that not only are all of us affected hourly in a material way by paper products, but that paper and its allied products also influence us spiritually, culturally and socially.

But let us consider the economic value of paper. It has been customary to say that the paper industry ranks fifth or sixth in the United States. There is evidence that it ranks higher. Our top paper and pulp economist believe that if wood cellulose fibers were suddenly withdrawn from the weave of our national welfare, the national economy would collapse.

Here is only a part of their argument for that theory. Four pulp dependent industries alone—the paper industry, the rayon industry, the printing and publishing industry, and the converted paper products industry—just those four—account for one-tenth of the economic wealth generated each year by the entire American industrial economy. These four industries employ 8¾% of all industrial wage earners; and the combined pay checks of these men and women equals 9% of the aggregate payroll of the entire American industrial economy!

It was the growing demand for paper which impelled the invention of woodpulp, so paper can take credit too, for such additional economic values as those which may be added to these tiny but strong wood cellulose fibers called woodpulp. Other values include the cellophane industry, the plastics industries, the munitions industry, the photographic film industry, the paint industry. We could proceed into indirect economic values such as activities in allied wood, chemical and machinery and equipment industries. With more time and space, we could follow those papermaking fibers into every nook and cranny of industry and the public welfare and the further we traveled the more we would understand what the experts mean when they say pulp and paper is not actually the fifth or sixth industry (for that is based merely on value of its own products) but the No. 1 industry of the whole nation.

CHARLES SUMNER BARTON—"We would understand that pulp and paper actually is the No. 1 industry of the nation."

We have witnessed astonishing growth of the paper business since the times of George Washington. In his time paper was a precious and scarce product. Today, in this country, our per capita consumption is 400 pounds.

The greatest growth has taken place within the memory of most of us. Today's consumption of paper is just twice what it was in 1926. With scientists working steadily to develop new products, dare any of us prophesy what it will be 20 years from now?

Packaging Information Is Available—Write to England

The Packaging Division of the Printing, Packaging & Allied Trades Research Assn., Patra House, Randalls Rd., Leatherhead, Surrey, England, maintains an extensive library of technical and scientific articles on packaging of all kinds. These are available to readers of PULP & PAPER.

Packaging Abstracts is published monthly by the British association and is available to non-members for 10 pounds 10 shillings per year, or 1 pound 1 shilling per issue. Copies of any articles mentioned in abstracts also are available. A charge is made to non-members.

Northwest Copper Still On Job Despite Fire

Northwest Copper Works, Inc., which suffered loss of its plant and engineering office at Portland, Ore. as result of a December fire, is rebuilding with a modern re-inforced concrete structure to be completed in March. Meantime the company's fabricating will be carried on at Albina Engine & Machine Works in Portland.

C. W. Kellogg, vice president and general manager of Northwest Copper—whose Florida vacation was cut short by the fire—says the new plant, main office and assembly yard are to cover an entire block.

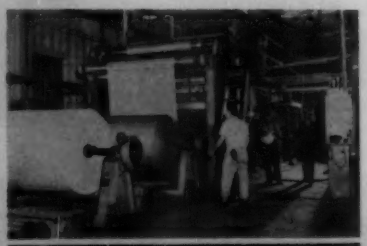
Weyerhaeuser Installs Waldron Laminator

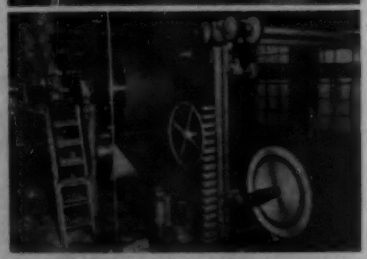
Weyerhaeuser Timber Co. recently augmented its Pulp Division containerboard operations at Springfield, Ore. with a laminating machine. According to Mgr. J. O. Julson, this addition not only permits the mill to produce a new line of containerboard products but will increase output of the plant. He anticipates increased tonnage from the mill "because production of heavy weight containerboard on our paper machine is at a lower daily tonnage rate than production of medium weight boards."

Most Springfield laminated production will consist of gluing two medium weight sheets together to form a heavy weight board. But Mr. Julson said, "experimental work will be conducted in the use of other materials, such as aluminum foil laminated to a kraft paper sheet. We also may produce containerboard with a coat of color applied for use in cartons on which various surface colors are desirable."

This John Waldron Corp. laminating machine has capacity for sheets up to 88-in. wide and speeds to 500 fpm. It is powered by a 75 hp dc Westinghouse motor operating in conjunction with adjustable-voltage type Westinghouse controls.

Installation of the machine and erection of the 36 x 112-ft. building containing laminating facilities were engineered by personnel of Springfield pulp division. William Pittam is plant engineer.





Weyerhaeuser's Pulp Division has added the John Waldron laminator shown at top in operation at its Springfield, Ore., kraft mill. It combines 26 lb. kraft liner and 27 lb. bleached kraft liner to produce heavy board for attractive cartons.

In lower view, a Waldron reel is receiving laminated sheet from a 2-roll dryer section in the Springfield mill.

Griffith S.D.T. ROLLS

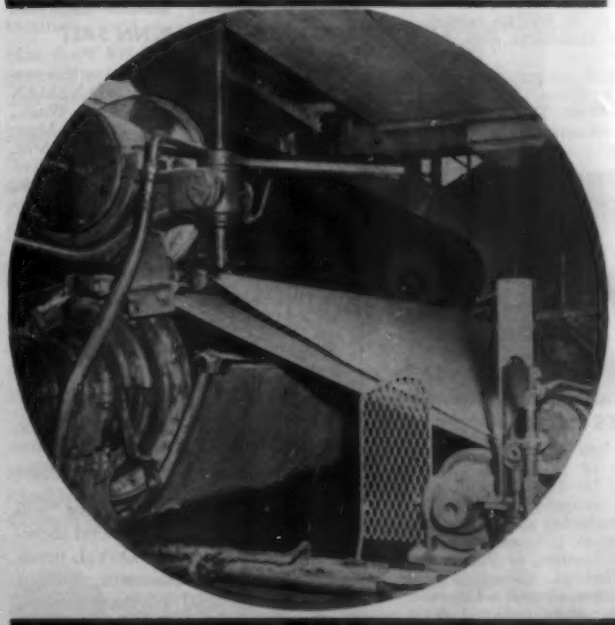
RUBBER COVERED "Self-Doctoring Topress" Rolls by GRIFFITH of Portland

Helps Port Angeles Increase Newsprint Production

- 2% BETTER WATER REMOVAL OUT OF FIRST PRESS
- 400% LONGER FELT LIFE

Crown Zellerbach's No. 2 News Machine at Port Angeles, Washington, is equipped with a Beloit Pick-Up Transfer. In over 100 hours of continuous operation (since last start-up) no breaks occurred at this press. Machine speed is in excess of 1,700 feet per minute.

The top roll is resilient GRIFFITH S.D.T. Three other Self-Doctoring Topress Rolls are running in this three-machine mill. (All were purchased separately from GRIFFITH at Portland.)



GRIFFITH S. D. T. Rolls are also running on Kraft and Sulphite machines in many positions from Lumpcrusher to Sizing Presses.

Bottom Suction Rolls are rubber covered and drilled by GRIFFITH at Portland.

Write or Telephone for an Estimate on Your Job

Griffith RUBBER MILLS

2439 N. W. 22nd AVENUE
PHONE: BEacon 7126
PORTLAND 10, OREGON

Rubber Roll Specialists Since 1911

PICTURE NEWS OF THE INDUSTRY

VETERANS AT JOHN STRANGE PAPER CO.

New members are welcomed into Quarter Century Club at John Strange Paper Co., the 3-machine chipboard, liner and wrapping paper mill at Menasha, Wis. In middle is J. H. LEVANDOSKI, Executive Vice President. L to r.: HENRY WEICHMANN, FRED WOJAHN, HARRY EATON and J. F. WOEHLER, new members; Mr. LEVANDOSKI; and WM. EHRGOTT, HUBERT SCHIFFER and DAN RALEIGH, committee members.

HEAD B-D LONDON OFFICE

H. P. TAYLOR (left) and DENNIS BECKER (right) are among executives heading new London office for Bulkley, Dunton Pulp Co. The new office will merchandise American and Canadian pulps in the British market.

NEW BAILEY MEN IN SOUTH

Bailey Meter Co., Cleveland, O., manufacturer of instruments and automatic controls, announces two new district offices in the South.

F. D. KRUSEMARK (left) is Manager of a new office at 6331 Aberdeen Ave., Dallas 30, Tex. R. E. BYERS (right), is Manager at 3256 Hendricks Ave., Memphis 11, Tenn.

The Dallas district covers north Texas and northwest Louisiana. The Memphis district includes west Tennessee, north Mississippi and Arkansas.

WILKERSON JOINS M & C; PAYZER IS MURRAY V. P.

ROBERT W. WILKERSON (left), new Adv. and Sales Promotion Mgr. for Minerals & Chemical Corp. of America, Metuchen, N. J., as announced by Exec. Vice Pres. A. G. BLAKE. Mr. Wilkerson, former advertising agency executive, will coordinate promotion for the merged Edgar Bros. and Attapulgus divisions in M & C Corp.

SAM D. PAYZER (right) appointed new Vice Pres. in charge of Engineering for D. J. Murray Mfg. Co., Wausau, Wis., according to Pres. ARNOLD W. PLIER. Mr. Payzer had been Chief Engineer. In 30 years with Murray, he helped develop the Murco chipper and other equipment.

KAMYR NAMES THESE

Kamyr, Inc., Hudson Falls, N.Y. has announced election of G. L. M. HELLSTROM (left), of Montreal, as Honorary Vice Pres. of the company in recognition of services in introducing and developing Kamyr equipment in U.S. and Canada; HARRY GLENN (center), of Paper Machinery Ltd., Montreal, Canadian representatives of Kamyr, elected a Director; NILS KLYKKEN (right) elected Vice Pres. in chg. Engineering. Mr. Klykken is an authority on Kamyr bleaching.

SWIFT OPENS TEXAS OFFICE; SOUTHERN MILL MGR. NAMED

W. C. LOEFFEL (left), whose appointment as Manager of a new Swift & Co. adhesives plant in Dallas, Tex., is announced by ED R. PAUL, Swift's General Mgr. of Adhesive Products, Chicago. New improved equipment for making adhesives, increasingly being used in the paper industry and others, will be installed at Dallas. Mr. Loeffel has been with Swift's since 1947.

VINSON K. SHANNON (right), promoted to Division Mgr. of The Mead Corp., operations at Sylva, N. C., succeeding J. RAMSEY BUCHANAN, who retires in a few years, but continues to direct Sylva public and community relations. Mr. Shannon, born in Forest, Va., started as 6th machine hand with Mead at Lynchburg 25 years ago, has been Asst. Mgr. at Sylva.

SALES EXECS FOR PENN SALT

President Fred Shanaman of Penn Salt Mfg. Co. of Washington makes this announcement: LEROY SHANAMAN (left), who has moved to Tacoma, Wash., in his capacity as General Sales Mgr., Heavy Chemicals Div., Penn Salt Mfg. Co. of Washington. He had long been located in Portland, Ore., as Sales Mgr., there, following the opening of the second Far Western Penn Salt chlorine-caustic soda plant in that city a few years ago. His wife, Mary Grace, and family will soon move to Tacoma. He is a graduate of U. of Oregon.

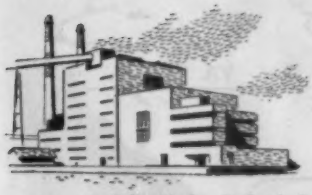
JAMES M. McCULLOUGH (right), who is now Asst. General Sales Mgr., directly in charge of sales from the Portland plant and export sales. Born near Mt. Vernon, Wash., he graduated from U. of Washington in 1934, when he joined Penn Salt. He is married, has two children, lives in Oswego, Ore.

Prediction for 1955

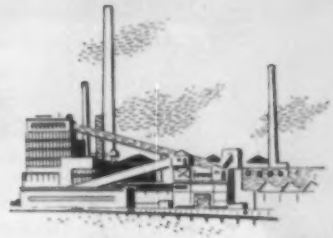
The pulp and paper industry "will have an excellent 1955 year-end showing," forecasts Pierre A. DuVal, president of DuVal's Concensus, Inc., a New York financial advisory service. Total production of all U.S. industries should be up 10%, he said.

6 new units in 6 years

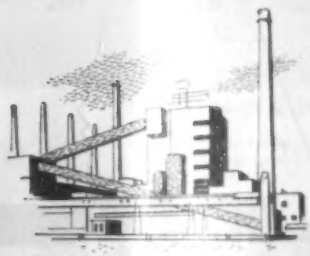
for New England Electric System



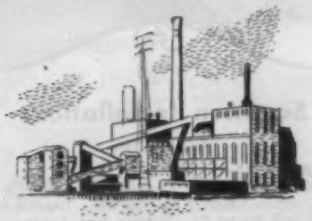
Salem Harbor Station in Salem, Mass.
Two 60,000 kw. units — '51 & '52



Webster St. Station in Worcester, Mass.
30,000 kw. unit — '50



South Street Station in Providence, R. I.
55,000 kw. topping unit — '53



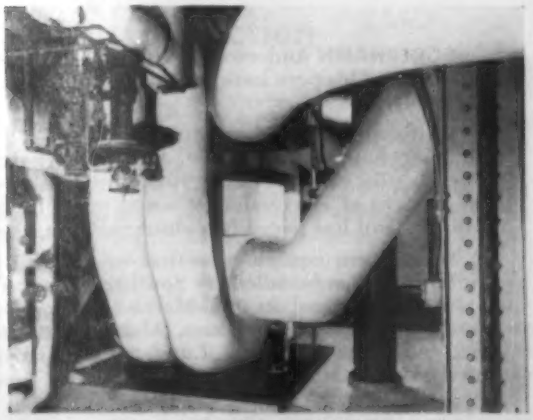
Manchester St. Station in Providence, R. I.
Two 40,000 kw. units — '48 & '49

Proof of the reliability of GRINNELL PREFABRICATED PIPING

Here's a clear-cut case of the value of choosing the right power piping fabricator *from the start!* New England Electric System, when launching its power expansion program, called in Grinnell. Satisfied that Grinnell's facilities rated very high, they okayed Grinnell Prefabricated Piping for the first of a series of new steam-electric generating units. The "proving ground" was to be the unit itself *in service.*

How efficiently that unit performed is written in the record! For starting in 1948, and then each year for 5 consecutive years, Grinnell Prefabricated Piping was employed *exclusively* in constructing 6 new units in the New England Electric System.

This special ability in the fabrication of piping is due to a number of things. Grinnell fabricates in shops under ideal conditions, with modern equipment, by personnel qualified for each class of work. Included in the price (which is determined in advance) are such items of expense as: interpretive engineering, shop sketches and planning, procurement of materials, power services, expendable tools and supplies. There are no charges for waste material or spoilage. All piping is rigidly inspected and tested to comply exactly with customer specifications and applicable codes. Consult Grinnell on *your* next piping installation.



Main steam and reheat lines at reheat intercept valve, Salem Harbor Station.

ATTENTION! *Company Groups and Technical Associations. A 30-minute color sound film showing the quality and economy of Grinnell Shop Fabrication of all classes of piping is available. Write us, giving date desired.*

GRINNELL
WHENEVER PIPING IS INVOLVED

Grinnell Company, Inc., Providence, Rhode Island • Coast-to-Coast Network of Branch Warehouses and Distributors

pipe and tube fittings • welding fittings • engineered pipe hangers and supports • Thermoflor unit heaters • valves
Grinnell-Saunders diaphragm valves • pipe • prefabricated piping • plumbing and heating specialties • water works supplies
industrial supplies • Grinnell automatic sprinkler fire protection systems • Amco air conditioning systems

SODERHAMN BARKERS and SLAB CHIPPERS
Now Giving Outstanding Service
In Over 300 Installations
Including 30 in Southern States

Partial list of Southern installations. Ten more scheduled for early in 1955.

SODERHAMN Anderson Mechanical Barkers and Soderhamn Slab Chippers have outsold all others in world-wide markets.

In the Southern States, our Company—a subsidiary of the Soderhamns Verkstader A.B., Soderhamn, Sweden, which is now celebrating its 90th Anniversary—pioneered the new era of conversion of wood waste by barking and chipping and has paced its subsequent progress.

Soderhamn equipment—first of its kind to serve in the South—was installed by Southern Lumber Company, Warren, Arkansas, in mid-March 1952. W. T. Smith Lumber Company, Chapman, Alabama, effected the second, and the Fordyce Lumber Company, Fordyce, Arkansas, the third.

In rapid order and growing numbers, other installations have followed throughout the South and in other States. Today Soderhamn machines are saving wood waste and earning profits for 35 North American mills.

Success of Soderhamn wood waste utilization equipment is a combination of these factors: Rugged strength in construction, simplicity of design, economy of operation, dependability of direct factory service, and engineering given on a guaranty basis of performance.

We invite you to send for further information on Soderhamn equipment—today.

Southern Installations

(Partial List)

ALABAMA—W. T. Smith Lumber Co., Chapman; Clancy Lumber Co., Grayson; Jackson Sawmill Co., Jackson; International Paper Co., Mobile; Tutt Lumber Co., Nanafalia

ARKANSAS — Barksdale Lumber Co., Amity; Bearden Lumber Co., Bearden; Reynolds-Draper Lumber Co., El Dorado; Fordyce Lumber Co., Fordyce; Gurdon Lumber Co., Gurdon; W. S. Fox and Sons, Pine Bluff; Urbana Lumber Co., Urbana; Southern Lumber Co., Warren

GEORGIA — Roundtree-Hunter Lumber Co., Fitzgerald; Bradley Plywood Corp., Reynolds-Manley Lumber Co., Union Bag & Paper Corp., Savannah; Darby Lumber Co., Statesboro

LOUISIANA — Woodard-Walker Lumber Co., Ada; H. D. Foote Lumber Co., Alexandria; Woodard-Walker Lumber Co., Heflin; Hunt Lumber Co., Ruston; Springhill Lumber Co., Springhill

MISSISSIPPI—D. L. Fair Lumber Co., Louisville

NORTH CAROLINA — Freeman Lumber Co., Ahoskie; H. M. Walker Lumber Co., Battleboro

SOUTH CAROLINA—Dargan Lumber Co., Conway

VIRGINIA—Potts Lumber Co., Barhamsville; Camp Manufacturing Co., Franklin; Gray Lumber Co., Waverly

Other Installations

Prairie State Paper Mills, Inc., Joliet, Ill.; Champion International Co., Concord, N. H.; Wilner Wood Products Co., Norway, Maine; Marathon Corporation, L'anse, Mich.; Weyerhaeuser Timber Co., Longview, Wash.; Canadian International Paper Co., Montreal, Can.; Bosques De Chihuahua, S. De R. L., Celulosa De Chihuahua, S. A., Chihuahua, Chih, Mexico.

and others

SODERHAMN MACHINE MANUFACTURING CO.
SODERHAMN, SWEDEN SINCE 1864 TALLADEGA, ALABAMA

CANADIAN REPRESENTATIVES: East Coast: Forano Limited, Montreal, Canada

POINTS WITH PRIDE

TROY BRANNAN JR.—"We're in this business to stay." He points out locations of Branco's concentration yards in Alabama.

PULPWOOD IS BUNDLED

These pulpwood bundles in Branco's Fort Deposit, Ala., concentration yard are banded with Signode Steel Strapping awaiting loading.

Case History of a "Dealer" in South

The concentration yard and the chain saw are credited by Alabama firm with doubling production

• Pulpwood production in the South, a substantial enterprise as measured by 16,127,000 cords delivered to mills in 1953, lies within the hands of responsible business men, leaders in their communities, yet it remains a field in which any man willing to work and meet his responsibilities can start from scratch to achieve financial security.

This is a situation developed over three decades in the Southern pulp and paper industry during which the harvesting of pulpwood and its delivery to the mill has been completely concentrated in the hands of "dealers" east of the Mississippi River, and "shippers" west of that stream. It is these dealers or shippers who send producing sub-contractors onto forest lands, even those owned by the mill being served, to harvest the trees for delivery as pulpwood.

Customarily a dealer serves but one mill in a geographically stipulated territory. A mill's procurement management has the problem of studying forest resources of every county in the area as shown by "Forest Survey" and in relation thereto the "guesstimated" volume take of all wood products industries, and then the pro-rated needs of the mill from month to month. This might be quite a hit-or-miss study until it gets down to pulpwood production quotas. Then it's practical in terms of physical effort, and dollar value.

In south central Alabama, a prolific area for Southern pine forests, the Branco Wood Products Co., at Brewton, serves as "dealer" for St. Regis Paper Co.'s big kraft center near Pensacola, Fla. Since the pulpwood production field is quite individualistic it can be said that Branco is not typical, but is characteristic in that functions performed and problems met are similar to those of other dealers and shippers.

Branco was established by Troy Brannan, Sr., in 1948, the principal in this case being a man who had spent his years in the woods products field. When Troy Brannan, Jr., returned from service in World War II he entered the business, and now operates it in conjunction with Pat Hayes, his brother-in-law. Troy says the late Jim Allen, a dominant factor in Southern pulp and paper expansion, talked his father into servicing Florida Pulp & Paper Co., now part of St. Regis.

Modern office of Branco Wood Products Co., Brewton, Ala.

Within its territory, Branco provides a hard core of the mill's pulpwood needs through regular producers who own their own equipment and work regularly in the business from day-to-day, week-to-week, and month-to-month. The balance, or fluctuating margin, is supplied by intermittent producers—those who come into the picture from time to time as factors involving their other interests cause them to turn to pulpwood—and farmers or others who cut wood from their own lands. All of these "producers" are strictly "on their own" and operate without Branco supervision.

In many instances, pulpwood sources are obtained by the producers, but Branco purchases 60% of the stands from which the wood comes. In furtherance of this phase, Branco employes three graduate foresters—one for each concentration yard—who aid the producers in cruising forest land, acquiring stumpage, and marking

trees for pulpwood cutting. Branco also employs three practical foresters of extended experience and who perform equivalent functions.

IN BUSINESS TO STAY—"We are in this business to stay," said Mr. Brannan, "and the landowners are encouraged to come in at any time to ask for practical advice about handling their wood lands. About 70% of Branco production comes from selective cutting; tops after logging, damaged or inferior trees, or from marked thinnings."

With proper cutting, pulpwood can be taken from a stand every five years. Clearing of land—take all—is done only if the owner insists. Since timber tracts are purchased in bulk (stumpage), Branco manages the cut to obtain the maximum return and in some cases as much as 75% may be in sawtimber. On good stands, Branco selectively cuts for poles and pilings, sawtimbers, and tops from tree-logs and small trees or those otherwise unsuited for a higher priced market.

In some cases, Branco has a logging contractor to take out these items; in others Branco may sell marked trees of 12-in. diameter and up to a sawmill operator. Branco gets 60% of its wood from landowners whose holdings are less than 1,000 acres. As an example of good land management, Mr. Brannan cites a tract near Fort Deposit, Ala., where a third selective cut is now being made.

Some years ago it was said the pulpwood formula down South was one man, one cord, one day. This production ratio is now about two cords per man/day, and for this Mr. Brannan credits the chain saw and the concentration pulpwood yard. Most producers use the chain saw, yet in the flatwoods section there are some of the wheeled saw types. Four men and a power saw will produce about 40 cords per week. The average producer with one truck and a total crew of six, including himself, will produce 35 to 40 cords per week on a 40-mile haul, subject to large variance depending upon timber, character of land, length of haul, etc. In some rough areas, a tractor may be used; in others, the pulpwood pallet. Generally, a mule is used to bunch tree lengths to the saw for bucking and loading.

Currently there has been a trend away from the war years so that labor and timber are in better supply, with more effective results. Slumping of lumber demand has caused many portable mills to discontinue operation so the pulpwood operator does not face competition for the small tree that will yield no more than one 2x4; also, sawmills as a whole are well satisfied now to see a No. 3 log (currently unprofitable as lumber) go into pulpwood.

NOW HAS THREE YARDS—Branco opened its first pulpwood concentration yard at Fort Deposit, Ala., in July 1952, and has added two more. The yard, said Mr. Brannan, has opened the field to the small farmer (or landowner) who can cut a load of pulpwood, bring it in, have it scaled and unloaded in a few minutes, and drive off with a check for the amount of money due. It's as easy as bringing a basket of eggs to the market.

Regular producers account for 85% of the wood delivered. For them, there is rapid unloading of trucks with mechanical equipment so a second hand is not needed to accompany the driver. They receive on each truck a ticket that identifies who delivered the wood and hence serves as the basis of payment on piece work basis, and at the end of the week there's the payoff for all wood delivered during the period. Formerly a man waited until the car was delivered to the mill, and settlement made on the basis of mill scaling.

Some producers handle their own truck deal completely, but Branco finances truck purchases for the greater proportion. In this case the producer selects his own truck (the 1½-ton or 2-ton is favored) and makes his own deal. Branco finances it much on the same basis as regular commercial agencies in that field.

If the producer experiences bad weather that interferes with pulpwood production and creates difficulty in making the weekly payment on the vehicle, the Branco company understands these conditions and can go along much more easily than a bank or finance company with a fixed payment schedule. Experience has shown that a five-day week is best suited for the yard operation. Trial showed Saturday's receipts only cut in on Monday's.

Opened first, the Fort Deposit yard occupies eight acres. It handles an average of 40M cords per year. Weather is a big factor in receipts, which may average between 600 and 1000 cords per week, but when crops are in and the weather good, farmer-cut wood may run total receipts to as high as 1800 cords.

Pulpwood is banded with Signode strapping before loading out to the mill. Straps are put on while the bundle is held up by the loader. At Fort Deposit, a pulpwood loader made by Harrison Mfg. Co., Columbia, S.C., is used. This unit has loaded out as high as 1200 cords in a 5-day, 50-hour week.

Loading at the Chapman, Ala., yard where about 20M cords makes the year's work, is effected with a Taylor Machine Works (Louisville, Miss.) "yardster."

Opened during 1953, a yard at Magnolia, Ala., embraces three acres, is equipped with a Hyster lift, and is estimated at 20M to 25M cord capacity annually. The lift is estimated at handling 100 to 150 cords per day.

St. Regis has a yard of its own at Wallace, Ala., to which Branco Wood Products Co., and Estes Lumber Co. deliver as "truck dealers."

Advantages from concentration yards include full loading of railroad cars, reduced labor, elimination of weather as a factor that might result in demurrage, said Mr. Brannan. While the producer can load effectively on a woods spur using hand labor and get out more wood by not limiting work hours, the stability of yard handling plus elimination of the extra hand tends to create an increasing trend toward the yard. For the railroad, there's a fast turn-around in pulpwood rack car loading.

Mr. Brannan thinks the future may find slab barkers located in pulpwood yards, also the acceptance of weight scaling of pulpwood at these yards during the next five years.

DEALER IS "ALL-AROUND" MAN—A pulpwood dealer, observed Mr. Brannan, must be a combination of banker, practical forester, business man, psychologist, plus a few other things. He must select, finance and encourage producers—all at his own risk. The pulpwood field, he said, offers a bona fide opportunity for the man who feels that economic urge to get out in front and is willing to work; in this field a man can start with nothing.

An illustration given was a negro working as a plow hand at $2.00 per day. Mr. Brannan financed a second-hand truck on nothing down. Seven years later, this producer owns his own home, a small store (family operated), an automobile, and is on his third truck.

Another producer started with 50 cents, rose to delivering 175 to 200 cords per week; lost his bearings financially, and went back to 50 cents.

Branco participates in the forest program of Southern Pulpwood Conservation Assn., helps those wishing to improve their forest stand to get free seedlings, and in general has a hand in those things within its territory having to do with good management for trees.

"Does Four Jobs at Georgia Plant"

CUTTING DEEP, Macon Kraft's TD-14A dresses the pile in the company's yard near Macon, Georgia.

Purchased for coal compaction, INTERNATIONAL TD-14A with an INTERNATIONAL DROTT Skid-Shovel now does wood handling, general grading and loading

BUILDING UP a big 2 cubic yards in the Skid-Shovel, the TD-14A starts another load on the way to the hopper.

MASTER MECHANIC S. D. "Jack" Frost of the Macon Kraft Company says: *"We are very well pleased with our TD-14A and Skid-Shovel. Due to the ease of changing from one attachment to the other, it is only necessary that we have this one versatile machine for coal handling, wood handling and general grading and loading."*

Macon Kraft Company found a fast way to solve four problems around the plant at Macon, Georgia.

They put an INTERNATIONAL TD-14A with an INTERNATIONAL DROTT Skid-Shovel to work compacting and sealing the company's pile. The speedy TD-14A completes compaction chores, fills the hopper, then goes to work on custom dozing jobs.

And when coal or dirt-moving work is completed, a pulpwood rack replaces the bucket on the Skid-Shovel for wood-handling.

INTERNATIONAL DROTT Skid-Shovels have the versatility that makes them first choice at those plants where one machine has to do a lot of jobs. To see how you can cut cost and speed up production, call your INTERNATIONAL Industrial Power Distributor today. He'll arrange a demonstration as fast as tomorrow, anywhere you wish.

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INTERNATIONAL HARVESTER

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INDUSTRIAL POWER

MAKES EVERY LOAD A PAYLOAD

NEW HARDWOOD CONCENTRATION CENTER SOLVED THIS MILL'S PULPWOOD PROBLEMS

Wood storage, conveyors and general view of Champion International Paper Co., which makes soda pulp, coating body stock (90 tons a day) and surface coated book and litho paper (110 tons a day). Its 32 buildings cover 7⅞ acres in Lawrence, Mass.

How New England Mill Solved a Dilemma

Champion-International Paper Co. management breathes easier with its new hardwood concentration center and debarking plant at Bow, N. H.

● A new step in pulpwood automation was taken recently when Champion-International Co. unveiled its $250,000 debarking plant at Bow, N.H. At this concentration point, eight miles south of Concord, C-I will draw its annual 25,000 cords requirement from a 4-state 75-mile radius.

C-I management can now breathe easier, says President Kurtz M. Hanson, for it was only a few years ago that long-haul pulpwood costs were making mill operations uneconomical.

To the people in the area, the debarking plant means that hardwood trees, formerly considered suitable only for firewood, will now reap a $500,000 yearly harvest. It also means that C-I is sinking its roots deeper in New England, and to a people disturbed by the southward trek of other industries, it is assurance that Champion-International is there to stay. As one industry spokesman remarked, it reverses a trend.

This Lawrence, Mass. mill makes 45 tons a day soda pulp, 90 tons coating body stock and 110 tons surface coated book and litho. About 40% of production goes to National Geographic magazine, owner of the mill. It has 2 Fourdriniers, 130 and 166 inches.

Spruce and later poplar were at one time the principal raw materials at the Lawrence mill. As the area became semi-urban, the supply dwindled and by 1948, C-I found itself hauling wood from as far away as northern Maine and at one time, New Brunswick. These long hauls drove pulpwood costs to the point where it was uneconomical to operate the mill.

At this point, the technical department scored an assist. By revising the cooking processes, they came up with a better quality pulp using hardwoods. Company directors, encouraged by this news, decided on a long-range program to insure a steady,

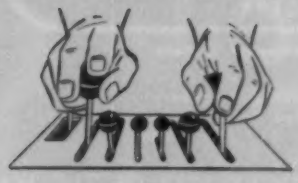
FORMAL DEDICATION of Champion-International's new debarking plant attracted about 200 guests, who arrived by special train. PULP & PAPER's camera snapped this quartet discussing features of debarking plant. (L to r): WILLIAM C. MACADAM, Asst. Treas., Champion-International Co., KURTZ M. HANSON, Pres., C-I, HAROLD HOLDEN, Pres., Eastern Corp., Bangor, Me., and GENE CLOPP III, Pres., Penobscot Chemical Fibre Co., Great Works, Me.

K-300 UNLOADING PULPWOOD FASTER—operator works with greater speed and safety because of greater "live" weight built into every Link-Belt Speeder. All-welded, stress relieved construction gives greater strength per pound. Alloy cast-iron clutch shells assure superior friction, longer lining life. Independent rapid boom hoist has power control up *and* down.

Now every Link-Belt Speeder shovel-crane has *Speed-o-Matic*®

—no lag, no jerk, no strain—

IT'S FULL POWER HYDRAULIC CONTROL



Today Speed-o-Matic controls are *standard equipment* on every size rig in the entire Link-Belt Speeder line! Full power hydraulic control is your key to 25% extra production . . . more consistent profits in the ½ to 3-yard, 6 to 60-ton work range. Here's why:

- REDUCED OPERATOR FATIGUE—fingers, instead of muscles, put full power to work.
- SMOOTHER CYCLES—complete cycle is one fluid motion.
- MORE ACCURATE CONTROL—operator always safely *feels the load.*
- REDUCED CLUTCH ADJUSTMENTS—clutch piston is self-compensating for normal lining wear and heat expansion.
- 150 WORKING PARTS ELIMINATED—maintenance costs cut.

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Builders of a complete line of crawler and rubber-tired shovel-cranes

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A NEW HIGH PRESSURE BRIQUETTE MACHINE . . .

is receiving universal acclaim as another great stride toward complete wood utilization . . . a new flow of profits to industry from waste material.

Developed in Switzerland . . . Manufactured by Sumner, the Glomera Briquettor is designed for three shift high production of a continuous flow of briquettes and logs "without use of any binder" from a wide assortment of industrial waste material such as Wood-Waste, Hog Fuel, Bark, Sawdust, Slabs, Edgings, Planer Shavings, Ground Nut Husks, Cotton Stalks and Husks, Sugar Cane and Olive Bagasse, Rice Husks, Sugar Beet Pulp, Cellulose Materials, Peat, Lignite, and Brown Coal . . . materials formerly considered too difficult to briquette.

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FOR COMPLETE WOOD UTILIZATION . . . IT'S SUMNER EVERY STEP OF THE WAY

economical supply of hardwoods.

NEW WOODLANDS DIVISION—William C. MacAdam, whose background included forestry work for Great Northern Paper Co., was engaged to survey available hardwoods in the area. He reported an abundant supply of birch, beech, maple and oak in northern Massachusetts, southern New Hampshire, southeastern Vermont and southwestern Maine, which he believed could be perpetually maintained with proper planning and execution of a modern conservation and procurement program.

As a result, C-I selected Mr. MacAdam to head its newly created Woodlands Division, and Bow, N.H., was picked as a central general procurement headquarters.

Another vital cost factor was hauling rough green pulpwood to the mill from Bow. Dick Ashton, chief forester for C-I, points out that a cord of hard pulpwood in rough green state weighs about 5,800 lbs. After debarking and seasoning, a cord is about 4,300 lbs.

Chief feature of the Bow plant is the Soderhamn Machine Mfg. Co.—Anderson Debarker, the first installation in the pulpwood industry in the U.S. This Swedish machine is widely used in Norway, Finland, Germany and Denmark. It was previewed at Bow in late 1952 by members of the American Pulpwood Assn.

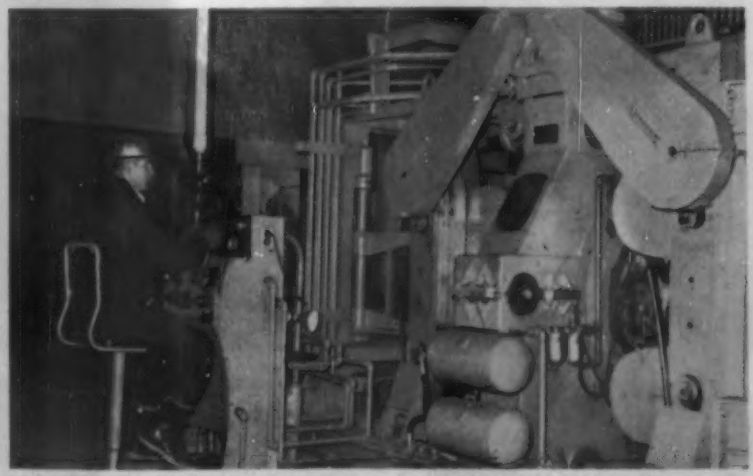
THE OPERATION AT BOW—Pulpwood arrives by truck at the Bow plant in 8, 12 and 16 ft. lengths, the traditional size in that region. It is unloaded by hand and placed in rough storage. A Pettibone-Mulliken Corp. log fork truck with 4-wheel drive and steer, and Cary-Lift moves the logs to a Forano, Ltd., log conveyor. This 6-strand C-132 chain moves at 30 fpm and has a maximum load of five cords or 15 tons. A Link-Belt pneumatic lock kicker shifts the logs onto a forano infeed conveyor which feeds the logs into the Anderson Debarker. This is a model B-20 with improved feedworks driven by a 30 hp drive. Maximum log diameter is 20 in., minimum 4 in.

The Anderson debarker removes bark by air-activated tools without wood loss, according to Champion-International operators. A Joy 120 cfm single stage compressor supplies air to the debarker. Removed bark is carried by a bark conveyor H100 refuse chain, driven by a 3 hp motor, to be burned as fuel.

Debarked logs leave the debarker and travel on a 24-in. outfeed conveyor driven by a 3 hp motor, to a Forano slasher loader with an automatic pneumatic trip. The Forano in-

THIS PETTIBONE-MULLIKEN CORP. log fork truck with four-wheel drive and steer, and Cary-Lift, moves long length logs from storage to the debarking building.

"THE MOST AMAZING THING I've ever seen," is the way one observer described the Cary-Lift on this Pettibone-Mulliken log truck. He added that the lift duplicates almost every motion of the human hand except sideways. Here, logs are deposited on the Forano Ltd. infeed conveyor which feeds the logs into the Soderhamn Mfg. Co. Anderson debarker.



CHIEF FEATURE of Champion-International Co's. new debarking plant at Bow, N.H. is this Anderson debarker, which according to C-I removes bark by air-activated tools without wood loss. This installation is first one in U.S. pulpwood industry.

clined fixed saw slasher, with chain feed at 28 fpm, has three 60-in inserted tooth saws with 4 ft. spacing. G-E 40 hp motors drive each saw. Sawdust goes to a Bannister sawdust collector.

The 4 ft. logs roll onto a 24-in., 125 fpm belt with a G-E 3 hp drive. A pivoted conveyor chute transfers the debarked logs onto a 200-ft., 1126 c chain portable steel trough conveyor and onto a portable steel stacker, 25 ft. high with extensions.

Debarked storage capacity is about 7,000 cords of 4 ft. wood. When seasoned, the logs are loaded by a Kohring crane with 55 ft. boom and an Owen orange peel grapple onto specially designed 50 ft. rack-end International Steel Co. railcars.

These railcars comprise a fleet of 18 which will operate only between Bow and Lawrence and represent a joint investment of over $100,000 by C-I and the Boston & Maine Railroad. Capacity of each car is about 22 cords. These cars have a 9 in. pitch to center for secure log stowage.

THIS KOHRING CRANE with 55 ft. boom and Owen orange peel grapple transfers debarked four-ft. logs from seasoning stack onto specially designed 50 ft. rack-end railcars.

NEW CARTHAGE MACHINE log splitter in action, breaking down oversize log, at Champion-International mill. A new woodroom, equipped also with Carthage 10-knife chipper, was built at the Lawrence mill.

THIS IS ONE of fleet of 18 pulpwood cars which operate only between Bow, N.H. and Lawrence, Mass. They represent a joint investment of over $100,000 by Champion-International Co. and Boston & Maine RR. Capacity of each car is about 22 cords.

WHY C-I CHANGED—An important factor to consider in C-I's changeover to hardwood pulping is that they have supplied National Geographic Magazine with all coated papers used in that world-famed publication for more than 40 years. This is about 40% of C-I production. National Geographic also owns all of C-I's stock, and this quality printer had to be considered in any changes that would affect printing qualities of paper supplied them.

National Geographic found that hardwood pulp improved the quality of the sheet as well as imparting greater resiliency to the coating base stock.

New Skoglund Barker To be Tested in America

The Skoglund barking machine, manufactured by Tampella Machine Works of Finland, is going to be tested in woodlands operations in U.S. and Canada. It is reported to have a favorable record for economy of operation and efficiency during extensive trials in Scandinavia.

The Skoglund barker is fully automatic and electrically driven by two totally enclosed motors. It is built on a frame construction and consists principally of inlet and outlet feeder with stepless speed changer, barking device and electrical switch-gear. It is said to bark easily and efficiently 2,200 logs of 10½ ft. length, 2-12 in. diameter per 8 hours. Under suitable conditions, the machine can be operated by only three men.

The feed assembly which consists of one inlet and one outlet device with spring loaded feed plates is constructed so that a large diameter log automatically is given a lower feeding speed than a small diameter log. Due to the stepless speed variator the feed can be adjusted by the operator, while the machine is running. This is said to insure high barking efficiency, speed and precision. The feed assembly, which is reversible, is hard-wearing and requires only slight attention.

The barking device consists of an accurately balanced steel drum with 3 steel cutters which are formed so that the logs open them automatically. They peel off the bark closely following the contour of the log and practically without loss of wood. It has a minimum of moving parts and so is said to require minimum repairs and down-time.

NEW SKOGLUND barker from Finland, being tested in U.S. and Canadian woodlands operations.

The electric push-button switch box is readily accessible and easy to handle. Each log can be handled successively without readjustment of the machine at continuously varying feeding speeds. The machine is light but robust. Rubber tire wheel sets may be attached.

The machine is patented by Tammerfors Linne-och Jern-Manufaktur Aktie-Bolag, of Tammerfors, Finland. North American representatives are The Jay Madden Corp., 10 Rockefeller Plaza, New York 20, New York.

RICHARD D. MERRILL, one of Pacific Northwest's pioneers in forest industries, has donated an original $10,000 to Univ. of Washington for a trust fund providing undergraduate scholarships, graduate fellowships and post-graduate research grants in the college of forestry. Mr. Merrill is a shareholder in Rayonier, Crown-Zellerbach, Scott Paper Co. and a director of MacMillan & Bloedel.

Don't be Satisfied with less than ALL NORTHWEST ADVANTAGES!

- **SIMPLICITY OF DESIGN**
  —for easy upkeep.
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  —eliminates weaving—assures the alignment of shafts and bearings and reduces wear.
- **"FEATHER-TOUCH" CLUTCH CONTROL**
  —easy operation—no shutdown because of control failure. No pumps or compressors.
- **CUSHION CLUTCH**
  —reduces overloads on parts under power when the tongs hang up.
- **UNIFORM PRESSURE SWING CLUTCHES**
  —eliminate the jerks and grabs that set a load to swinging.
- **BALL AND ROLLER BEARINGS ON ALL HIGH SPEED SHAFTS**
  —minimum power loss to friction.
- **NORTHWEST WORM BOOM HOIST**
  —boom up, boom down—no jumping, no chattering, just velvet action under power both up and down. Independent High-Speed Boom Hoist available if desired.
- **NORTHWEST DIFFERENTIAL STEERING**
  —positive traction on both crawlers while turning as well as when going straight ahead assures easy negotiation.
- **CRAWLER GEARS FULLY ENCLOSED**
  —nothing uncovered to pick up trash.
- **EASY CONVERTIBILITY**
  —all Northwests are easily converted to Shovel, Dragline or Pullshovel.

Here is another of the many Northwests serving both large and small paper mills in the United States and Canada. This is one of three Northwests that have been bought by the National Container Corp. of Georgia.

Northwest equipment has proved itself in the Paper Mill Field. Northwest brings you a combination of advantages that mean lower cost pulp handling, easier travel about the mill and greater flexibility for those mills that must get more all 'round service from their equipment.

Look over the Northwest advantages. Talk to Northwest owners and let a Northwest man tell you what a Northwest can do for you.

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The Crane That Goes Anywhere

10 to 50 TONS

SOME "BIG WHEELS" AT WESTERN FOREST CONFERENCE

(L to r): CHAS. S. COWAN, Wash. Forest Fire Assn., elected Treas. of WFCA; STUART MOIR, reappointed Forest Counsel to the association; E. R. ASTON, Omak, Wash., lumberman, new Pres.; JOHN L. ARAM, Idaho lumberman, former Pres.; GEO. S. LONG JR., Weyerhaeuser, new Secy. Among new Vice Pres. are Ed Stamm of Crown Zellerbach, John Liersch of Powell River Co., and Corydon Wagner, St. Paul & Tacoma. Conference speakers included CHARLES YOUNG (center). Weyerhaeuser Economist, who discussed forestry as a business; HAROLD B. SHEPARD (right), Federal Reserve Bank of Boston, who said rates for fire insurance policies for forest ownerships are favorable.

How Logging Helps Watersheds

Western conference also hears how "milking down" high voltage clouds may prevent forest fires.

• Gains in good forest management and conservation achieved through the cooperative efforts of private owners and government agencies were lauded by Secretary of Interior McKay in the keynote address at the 45th annual Western Forestry and Conservation Association conference in San Francisco, Dec. 8 to 10.

About 20 pulp and paper industry leaders of the Pacific Coast–Canadian and American–attended. Ted Tinker of APPA and other national leaders of this industry had planned to attend, but were forced to cancel out.

Secretary McKay's address was of special interest as it came only a few weeks after a newly elected Senator in his state, a champion of government ownership and control, upset Republican control of the Senate in the new Congress.

Delegates with particular interests in pulp and paper who attended included M. V. Catlow and V. Dickhaus, Puget Pulp; John Liersch, Powell River; Arnold Brandis, Longview Fibre; Ed Stamm, Clarence Richen and Billy Welsh, Crown Z; Fred Mulholland, Elk Falls; Paul Dunn, St. Regis; Henry Dennis, J. G. Rowbury, Scott Paper; Frank Loud and Theo. Yocum, Ketchikan Pulp; L. J. Forrest, Gilbert Liming, W. L. Vincent, Donald Stubb, Rayonier; Walter Koerner and Richard Vivien, Alaska Pine; Joe Robinson, Everett P & P; Parks Walker, Publishers' Paper; Wm. McMahon and Tom Wright, Can. Forest Products Ltd.; Otis Hallin, Northern Pulpwood Ltd.; Phil Weyerhaeuser, Geo. Long Jr., Royce Cornelius and Edmund Hayes, Weyerhaeuser; Geo. Jewett, Geo. Beardmore and E. C. Rettig, Potlatch Forest; James Corlett and Robt. Stoebig, Oregon P & P.

Next conference was set for Portland, Ore., Dec. 6-9, 1955.

CUTTING IMPROVES WATERSHEDS–Speaking on watershed management, E. A. Colman, California Forest Experiment Station, Berkeley, Calif. described a study conducted in Colorado, which showed that an increase of 30% in quantity of water available for streamflow was obtained as a result of clearcutting plots of lodgepole pine for Consolidated Water Power & Paper Co. in Wisconsin. These showed 3 inches less annual water loss by evaporation from snowpacks than on uncut plots.

George P. Melrose, Aluminum Co. of Canada, Ltd., Kitimat, B. C., stated that in British Columbia the value of power produced from watersheds on three water-power developments, one almost completed and two in prospect, would be $100 million a year, for an output of 5 million hp.

Loss of forest values would be $370,000 a year, based on flooding of 200,000 acres, which is 2% of the total forest land in the watersheds. An annual yield of 660,000 cu. ft. was estimated for this area. The aluminum company and Powell River Co. are jointly planning a new paper mill at Kitimat.

"In spite of these power developments, the British Columbia forestry industry is increasing. There has been an increase of 190 sawmills in the past year. Since the war four pulp and cellulose mills have been built and three more are in prospect. Existing pulp mills have increased capacity," declared Mr. Melrose.

Seattle, Bremerton and many other Pacific Northwest cities permit sustained yield logging on their watersheds, and with excellent results, said Allen E. Thompson, forester for the Seattle water department.

Under a long-range program now in effect, an annual harvest of 35 million ft. of timber is taken from the Seattle watershed, this being the estimated sustained yield capacity of the lands. Harvested lands reforest quickly under modern block-cutting methods, he explained.

"The second-growth forest, now many thousands of acres in extent, is providing excellent watershed protection; perhaps even better than the virgin forest that preceded it," he declared.

Chairman C. S. Cowan, Washington Forest Fire Association, Seattle, reported the following forest fire record in the western states:

Number of fires: 1954–6216; 1953–10,189

Acreage burned: 1954–181,530; 1953–267,737

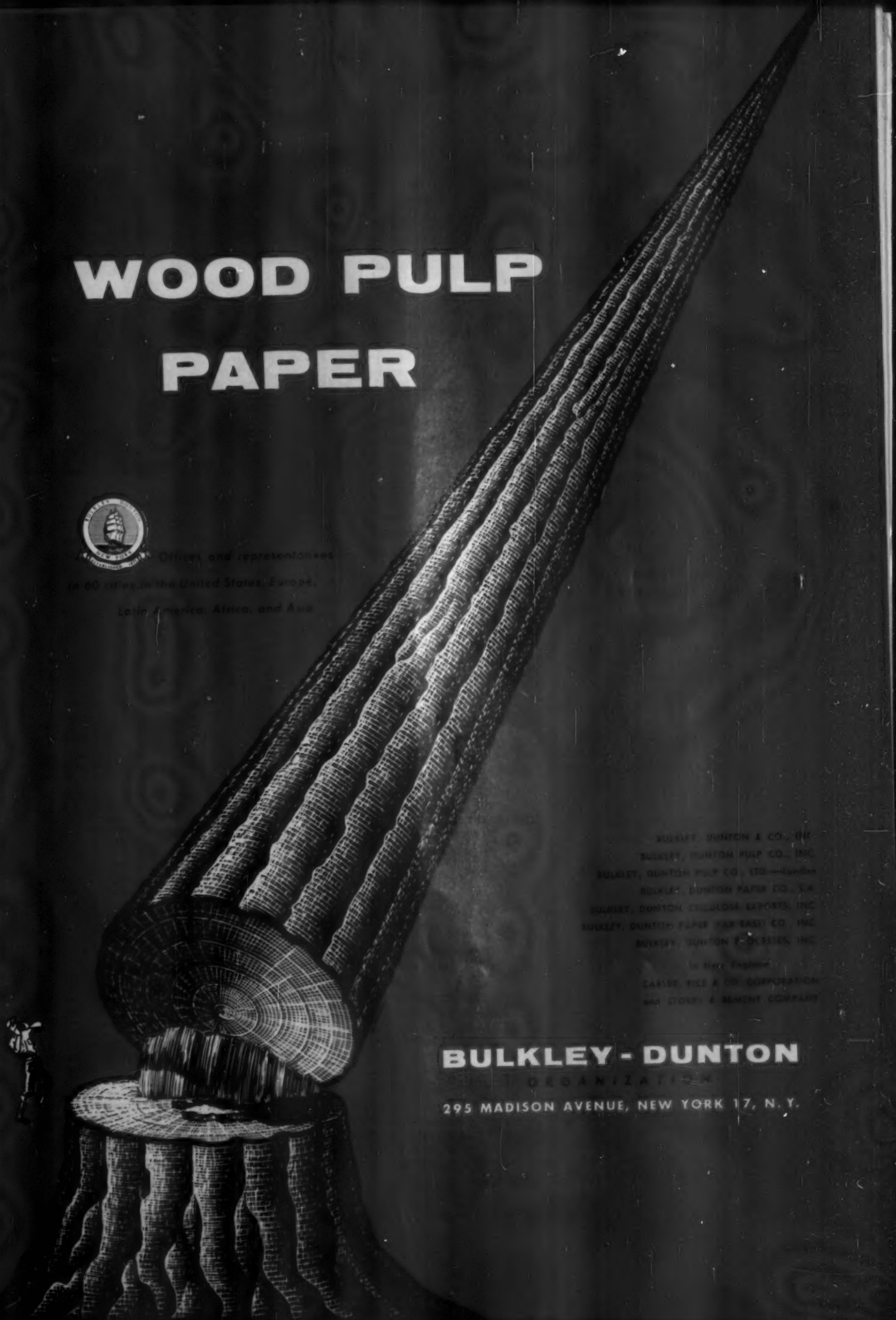
Timber loss: 1954–21,946 mbm; 1953–43,427 mbm

"PROJECT SKY FIRE"–An exciting new method of fire prevention in western forests was forecast by Jack S. Barrows, U.S. Forest Service, Missoula, Mont. "Project Sky Fire," a cooperative research project, indicates that clouds which breed lightning may be "milked down" of their fire-starting high voltage.

"Project Sky Fire" is being carried on by the U.S. Forest Service and Munitalp Foundation. A cloud survey is being made from a network of fire

WOOD PULP
PAPER

Offices and representatives in 60 cities in the United States, Europe, Latin America, Africa, and Asia



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lookout stations throughout the west. Observers report cloud heights and speeds and characteristics of lightning storms.

Also being studied is the "jet stream"—a mammoth river of air flowing across the sky at altitudes of 20,000 to 40,000 feet. A mobile meteorological station was used in 1954 to measure all conditions. At selected cloud-survey stations time-lapse motion pictures give the life cycle of cloud formations which give birth to lightning.

The Stanford Research Institute report, which forecast a doubling of U.S. pulp and paper production by 1975, was reviewed by A. Kenneth Beggs, of the Institute. (See October 1954, PULP & PAPER.)

"We could finance the log, but not the tree," stated Marshall Dana, U.S. National Bank, Portland, Oregon, in explaining the background of the Cordon-Ellsworth Timber Credits Act.

The basis for fire insurance policies for forest owners was considered favorable by Harold B. Shepard, Federal Reserve Bank of Boston.

Roger R. Robinson, Bureau of Land Management, Anchorage, Alaska, reviewed plans for pulp and paper expansion in Alaska. He cited the pending sawmill and pulpmill of Pacific Northern Timber Co. at Wrangell; Wrangell Lumber Co., now operated by Japanese; two pending applications for pulp mill timber sales, to Georgia Pacific Plywood Corp. and Alaska Lumber and Pulp Co. of Juneau and Tokyo. He said Alaska timber is largely over-mature and ready for harvest.

George L. Drake and Clyde S. Martin received engraved plaques for outstanding contribution to forestry and conservation.

Mr. Drake recently retired from the Simpson Timber Co., and Mr. Martin, who recently was appointed as advisor to the Hoover Commission, retired as forest counsel for Weyerhaeuser. Both men are now consulting foresters at Tacoma, Wash.

AFPI Program And Election

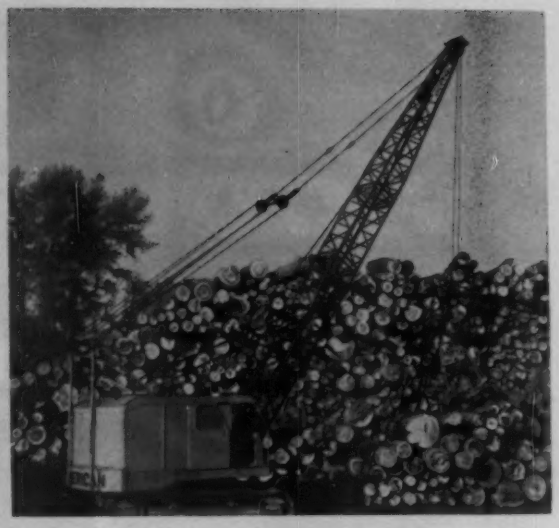
A program to tell the public about multiple use factors for private owners of forests has been adopted by the American Forest Products Industries, Inc.

Leonard G. Carpenter, president, McCloud Lumber Co., Minneapolis, was re-elected president. Also elected were William Swindells, Willamette Valley Lumber Co. and associated in the new Western Kraft Corp., Albany, Ore., and W. J. Bailey, West Va. P&P Co., N.Y.C., vice presidents; P. H. Glatfelter, P. H. Glatfelter Co., Spring Grove, Pa., treasurer; and William B. Greeley of Seattle, chairman of the board.

New trustees include J. P. Weyerhaeuser, Jr., president, Weyerhaeuser Timber Co., Tacoma, Wash., and James D. Bronson, Cascade Lumber Co., Yakima, Wash.

Re-elected board members include John H. Hinman, International Paper, James L. Madden, Scott Paper, Vertrees Young, Gaylord, and Sydney Ferguson, Mead Corp.

CRANE IN WESTERN WOODYARD



AMERICAN HOIST & DERRICK ¾-yd. BLAW-KNOX clamshell operating in woodyard in Everett, Wash. Unit is powered by GMC diesel through torque converter. Here, Everett Pulp & Paper Div. of Simpson Timber Co. receives railcars of cottonwood logs, which are cold-decked along banks of Snohomish River and floated downstream to the adjacent mill. This crane with 60-ft. boom keeps unloading and decking on schedule.

Bonanza For Dealers

Pulpwood suppliers for St. Regis Florida mills were paid off recently with 151,570 silver dollars reportedly worth about $17 each.

The shipment of dollars dated in the 1880's were released in error by the mint. Wood suppliers were paid off at ten points between Gulfport, Miss., and Jacksonville.

APA Issues Training Guides

Three new training guides primarily for pulpwood cutters have been released by the American Pulpwood Assn. They supplement three booklets issued in mid-1954 and are "Use and Care of Axes," "Use and Care of Pulpwood Hand Saws," and "Pulpwood Cutters' Notebook."

New Link Belt Crane

Link-Belt Speeder Corp., Cedar Rapids, Iowa, is introducing a new ¾-yd. crane with "big rig features." Purpose of this combination say company officials, is to assure a greater return per equipment dollar.

APA Fellowship Open

A fellowship at the State U. of New York College of Forestry for development of a directory of research in growing and harvesting pulpwood will be sponsored by the American Pulpwood Assn.

A graduate fellow, on a 12-month basis at $2,400, will be appointed to assist. Applicants should address the Graduate Committee, State U. of New York College of Forestry, Syracuse 10, N. Y.

NEW WASTE WOOD CHIPPER

A waste wood chipper especially designed for sawmills who wish to make chips economically is offered in three disc sizes: 36", 42" and 48". Under normal operation these chippers can produce up to 15, 18 and 22 cords per hour respectively with low horsepower.

Tests made on southern pine slabs indicate that the chips produced by these machines may not need screening. The economy factor from this point alone is considerable. Most sawmills can pick enough clean wood off their waste conveyor to make a chipper installation well worth while, even without barking.

These chippers are ruggedly constructed and are designed especially for easy installation and low maintenance. These chippers are produced by the Hansel Engineering Company, 1500 Westlake Avenue North, Seattle 9, Washington. Inquiries in the South may be made to Owen-Richards Company, 1009 2nd Avenue North, Birmingham 4, Alabama.

Comparative tests made with the Hansel chipper and other chippers on Southern pine slabs indicate that the Hansel chipper makes a superior paper with greater strength. As a result of these tests several of these chippers are being ordered by a large kraft mill in the South.

(ADVERTISEMENT)

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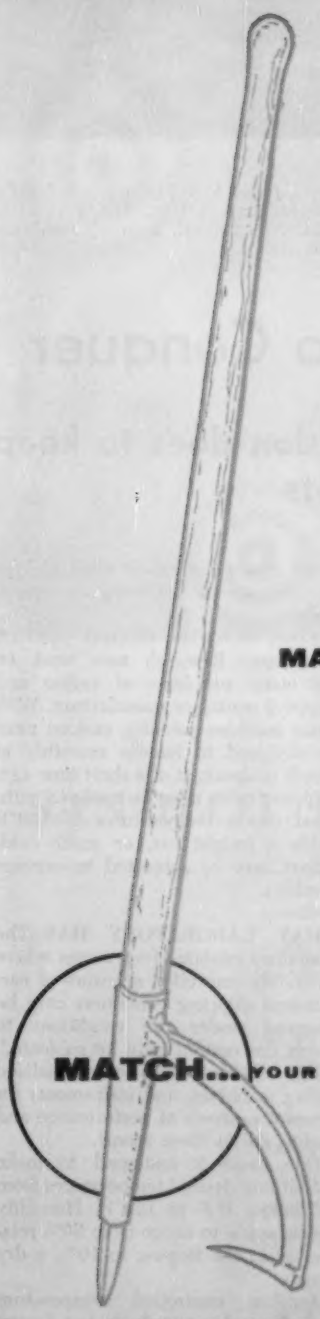

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AMERICAN LOGGING TOOL CORPORATION

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INSIDE THESE GATES, MORE USES FOR CONTAINERS ARE DEVELOPED

(Left) What was once a high school, now the Research and Development Division of Fibreboard Products, Inc., at Antioch, Calif., 40 mi. east of San Francisco. (Right) In consultation, DR. HOWARD S. GARDNER, Director of Research and Development (seated at desk); facing him, l to r: DR. GEORGE E. MARTIN, Chief Chemist, Antioch Div.,; DR. DAVID G. EDWARDS and MONROE F. SMITH, both of Fibreboard Research and Development Div.

New Packaging Kingdoms to Conquer

What well-equipped research division does to keep board mills in race for new markets

• The Research and Development Division, Fiberboard Products Inc., Antioch, Calif., and its staff of research scientists, headed by Dr. Howard S. Gardner, has played a large part in the recent development of corrugated and solid fiber containers for the shipment of fresh fruit and vegetables, opening up an entirely new field, as well as in the introduction of further improvements in the company's extensive line of folding cartons.

The increasing demand for coated packaging materials is now one of the major concerns of this division and it has the equipment to do a thorough job in this field.

To house its staff of chemists, chemical engineers, physicist, mechanical engineers, and service members, Fibreboard set up modern laboratories and testing facilities in what was once a high school building on the outskirts of Antioch. Both fundamental and applied research problems are worked on there.

Teamwork in research is stressed by Fibreboard which thinks that it takes diversity of personnel to make a team—plus careful advance planning. The company believes that fundamental research is somewhat similar to exploring a new country to determine its resources and to map the lay of the land. The value of such work is not always apparent immediately. On the other hand, the work done in applied research takes the discoveries of fundamental research, and applies them to specific problems.

At Antioch, Dr. Gardner and his staff make the word "development" (in the title of the division), significant by carrying forward new scientific discoveries by means of applied research and carrying them out on a commercial scale. The pilot plant method is used extensively. First, a hand-operated process is developed and its operations perfected, and from that operations are transferred to mill equipment.

The Research and Development Division is strategically located 40 miles east of San Francisco, near three of the company's big divisions manufacturing paperboard, corrugated cases, folding cartons, pulp, semi-kraft corrugating medium, and bleached kraft food carton board.

Naturally, the laboratory has an adequate library including general scientific subjects as well as material on pulp and paper manufacture and packaging. Membership activities in such bodies as The Institute of Paper Chemistry, Stanford Research Institute, TAPPI, Research and Development Associates, Food and Container Institute, Inc., and the American Society for Testing Materials are coordinated here, and the mass of technical information produced through these media are made available for use throughout the company operations.

From forest to finished product, Fibreboard Research men work on the many problems of carton and shipping container manufacture. With faster machine packing, cartons must be designed to handle smoothly at speeds undreamed of a short time ago. Shipping cases must be made to withstand desert temperatures of 150°F inside a freight car, or arctic cold. Others may be subjected to extreme humidity.

WHAT LABORATORY HAS—The laboratory contains four rooms where accurately controlled exposure of cartons and shipping containers may be observed under the conditions to which the cartons may be subjected. Many different types of specialized testing machines, and instruments for accurate measure of performance and quality are in these rooms.

One room is equipped to make tests at any desired temperatures from 20° below 0°F to 150°F. Humidity can be made to range from 90% relative, as in the tropics, to 10%, a dry climate.

Another controlled temperature room is used primarily to test frozen food packages. The temperature can be held for as long as desired at zero, and 50% relative humidity. Periodic

SANDLOT PITCHER-1910

That's big, amiable Ed Vanderlinden. As a kid he loved baseball, and winter sports, too. Later he hit the trenches with the First Division. And, for more than thirty years now, Ed's vigor and enthusiasm have been devoted to making good felts better. Today he's a specialist in wool carding—a vital operation where the strength of Appleton felts is born.

Ed Vanderlinden is typical of the steady, long-experienced workers at the Appleton Woolen Mills . . . a 73-year-old organization dedicated to development, progress, and the production of ever finer felts—for the finest paper-making.

APPLETON WOOLEN MILLS

APPLETON, WISCONSIN

TESTING AND LAB MACHINES HELP DEVELOP NEW PRODUCTS

(Left) Rough handling drum simulates severe shipping conditions encountered by containers. (Center) Demonstrating Mullen "pop" test; also shown, equipment to test crush resistance at left, Elmendorf tear tester at right. (Right) Special laboratory coating machine used by Fibreboard's Research and Development Div. to apply coatings to containers and folding cartons.

weighing at room temperature determines the loss of moisture.

Still another room is steadily maintained at 110°F, and 15% relative humidity, to test various cartons under desert storage conditions. For general testing of paperboard, after it is predried, the normal moisture content of about 7% is restored in a room held continously at 73°F, and 50% relative humidity, by conditioning it for 48 hours or more. More testing equipment to determine the properties of both paperboard and set-up cartons is contained in this room.

In the laboratory is a Baldwin-Southwark Universal testing machine, used to make either compression or tensile tests. The platens of the machine can handle compression tests of the largest shipping cases, yet it can also be used to test small folding cartons.

Among other devices in the laboratory are a 7 ft.-diameter tumbling drum, a drop tester, and measuring equipment for bursting strength, adhesive bond, puncture resistance, folding strength, moisture resistance, blocking strength of waxed surfaces and tensile strength of taped joints.

In addition to the rooms described above there are three general and chemical laboratory rooms, a coating laboratory complete with experimental coating equipment, a papermaking laboratory with beater for pulp refining and a sheet forming machine, a photographic darkroom and a machine and instrument building shop.

General Electric supplied the motors, and Minneapolis-Honeywell supplied the control instruments for the laboratory conditioned rooms.

Work carried on by Fibreboard Research and Development Division is closely tied in with work in the various mill laboratories and with the sales and production departments.

Asten-Hill Building New Plant in the South

Asten-Hill Mfg. Co. has moved into the fast-growing South with construction now under way on a new plant to manufacture Asten Dryer Felts at Walterboro, S. C.

Walterboro is about equidistant from Charleston, S. C., and Savannah, 30 miles inland from the coast.

This modern, new plant is designed for the specific purpose of manufacturing asbestos dryer felts, like the main plant at Philadelphia. Offices and manufacturing departments will be on one floor and provision is made for streamlined production.

In Canada, Asten Dryer Felts are manufactured by Asten-Hill Ltd., Valleyfield, Que.

New Sulfite Pond For Wisconsin Mill

It will take 7,100 ft. of 4-in. stainless steel pipe to carry sulfite effluent from Consolidated Water Power & Paper's Wisconsin Rapids mill to a projected soil filtration pond on Hunters Island in the Wisconsin River, under a plan which is expected to receive state approval.

This would be operating by May, 31, carrying 200,000 gals. per day. A causeway and bridge also will be built to the island, which Roadbinder trucks will use to carry off stored liquor during periods when more is needed for highways than the mill produces. A smaller storage pond also will continue in use.

IN NEWS OF NOPCO

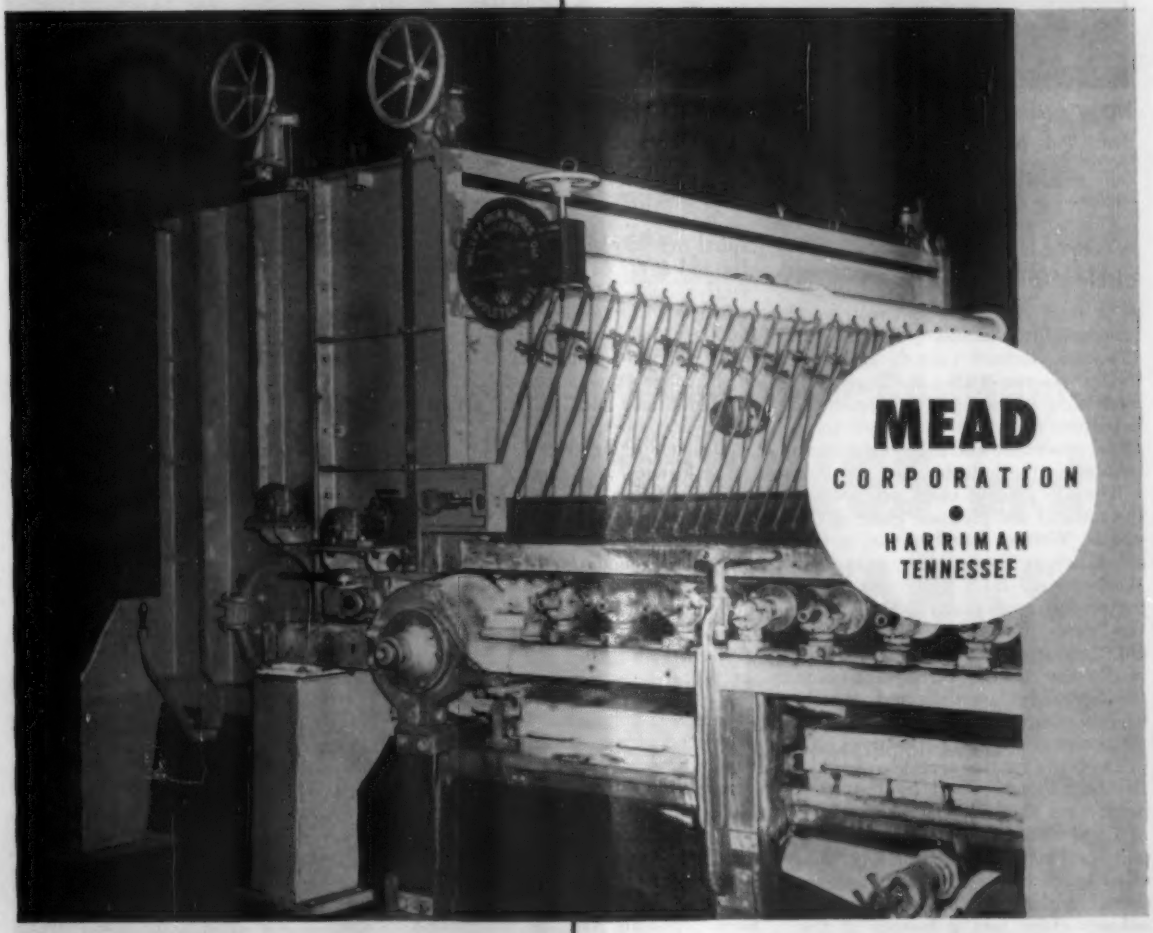
(L to r) W. B. MOREHOUSE, Asst. Vice Pres., Nopco Chemical Co., discusses plans with R. B. PORTER, new technical service Representative. Mr. Porter will spend most of his time in the field, visiting paper mills, studying their problems and showing use of Nopco paper sizes, etc.

TRAVIS V. RANKIN new General Sales Mgr. for all Nopco products on Pacific Coast, with headquarters at Richmond, Calif. He recently visited new Nopco office and warehouse, especially important to Coast pulp and paper industry, at 1233 N.W. 12th Ave., Portland, Ore., where JACK J. RYAN is local Nopco rep. Mr. Rankin graduated from Lewis Institute in Chicago and was District Mgr. in Ohio area and before that in Southwest for Nopco.

WALTER E. BREWER who succeeded Mr. Rankin as Central Dist. Sales Mgr. He also will continue as Mgr. of Eastern Industrial Sales Dist., with headquarters in Harrison, N.J. Former Coast sales chief, HAROLD A. SWANSON, is now Asst. Vice Pres. Vitamin Div.

ANOTHER

1954 START-UP



VALLEY STOCK ENTRANCE EQUIPMENT

write VALLEY IRON WORKS CO.
APPLETON, WISCONSIN

HOW CHIPS ARE CONVEYED AT OCEAN FALLS

(Left) This photo from barge shows dock chip hopper and blower house at Ocean Falls, with 16-in. pipeline going to kraft mill. The derrick barge unloads its Owen bucket into hopper.

(Right) Fir chip handling dock hopper equipment, showing Link-Belt flight type feeder conveyor (top) which discharges into Fuller Co. chip line charger. The 16-in. chip pipeline passes under charger.

Airveyor is Part of New Chip System

● A new system for efficiently and economically handling chips for Crown Zellerbach Canada Ltd. kraft mill at Ocean Falls, B.C., recently went into operation. It represents a departure from the company's traditional procedure and follows a pattern unusual in the industry.

The Douglas fir chips originate in the sawmill and plywood plant of Canadian Western Lumber Co., a C-Z subsidiary at Fraser Mills, near New Westminster, B.C. They are transported by barge nearly 300 miles by the "inside passage" to the pulp mill. On their return to the Fraser River plants the barges carry high-grade sawlogs which are delivered, usually in Davis rafts, to Ocean Falls from the company's logging operations.

Towboats for this service as well as the barges are owned by the company. One barge carries a maximum of 1,400 units of chips (200 cu. ft. per unit) or 700,000 bd. ft. of logs. Another barge is equipped with a steam derrick and 6-yd. chip bucket which unloads chips into a hopper at the Ocean Falls docks. When logs are being loaded the Owen chip bucket is removed and the derrick and barge shifted to a position alongside the woodroom's sorting boom. The logs are lifted and placed on the barge by slings which are left on the barge for the unloading operation.

Important part of the chip handling equipment is the Fuller Airveyor. A 30-in. Link-Belt flight conveyor rated at 30 to 60 tons per hour is driven by a variable speed drive into the No. 3½ chip feeder. This moves chips into the Airveyor which delivers 30 units per hour to outside storage or directly into chip bins. A Roots-Connersville blower blows chips through a 16-in. spiral welded pipe a distance of 1,700 ft., and is driven by a 360 hp diesel engine.

Outside storage accommodates 3,500 units, and recovery is carried out by bulldozing chips into a 30-in. flight conveyor which discharges into a chip feeder and then back to the Airveyor.

Over chip bins, the chips are separated in a cyclone of 8 ft. diameter and discharged onto a 28-in. distributor belt equipped with a Link-Belt tripper. The belt also receives chips other than Douglas fir so the two can be combined and distributed as required.

Announce Bolton Essay Contest Subject

John W. Bolton and Sons, Inc. of Lawrence, Mass., manufacturers of stock preparation equipment, announces the subject for the 1955 Bolton Award essay contest will be, "The Value of Better Mill Communications." This contest is open to all employes of North American pulp and paper mills, and is sponsored by the Superintendents Assn. in conjunction with Bolton and Sons. There will be 13 cash prizes totaling $3250.

Hercules Enters Tall Oil Field

Hercules Powder Co., which sells products to pulp and paper mills, will now buy crude tall oil from east coast kraft mills. It is going to manufacture resins, purified fatty acids and other tall oil products at a new plant near Franklin, Va., starting up in Jan. 1956. Capacity—35,000 tons annually.

Tall oil, by the way, derives its name from the Swedish tallolja, which means pine oil.

Dard Hunter Museum Ready for Visitors

The Dard Hunter Paper Museum, long a showplace of MIT in Cambridge, Mass., is now finally completely installed in its new permanent home in the sub-basement of the Institute of Paper Chemistry's General Activities Bdg., Appleton, Wis. Westbrooke Steele, Institute president, says it is ready to be seen by any interested persons.

Mr. Hunter and his son, Dard Hunter, Jr., spent several weeks arranging the famed exhibit.

Hooker Cuts Costs To Midwest Mills

Cost to customers will be cut in barge shipments of caustic soda from Hooker Electrochemical Co.'s new plant at Montague, Mich., according to President R. L. Murray.

Since the Montague plant began production of caustic soda, chlorine and hydrogen earlier this year, evaporation equipment was added to produce 73% caustic soda, in addition to 50% caustic, as planned earlier. This permits a freight saving to customers located relatively distant from the plant.

Lockport Felt Plant To Serve South

Lockport Felt Co.'s new branch production plant in the South is taking shape rapidly at Starkville, Miss. Home of Mississippi A. & M. College, Starkville possesses the attractive retail shops, and college atmosphere, yet is welcoming Lockport Felt by erecting the building with local funds for lease to the company. The plant is located just outside the municipal limits on U. S. Route 82.

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VIEW SHOWING how Moody automatic paper tail cutter is installed at the reel. Note close proximity to the reel drum and comparatively small amount of space occupied. Push button control station is located at front side of reel, while actuating motor is at back side.

Papermaker Develops Tail Cutter

SUCCESSFUL DEVELOPMENT of an automatic paper tail cutter that has a practical application at the reel, behind the last dryer, or ahead of size press or breaker stack has been announced by "Bill" Henderson, of W. W. Henderson & Sons, Pensacola, Fla. Earlier models in various mills have afforded the inventor, Eddie Lee Moody, the opportunity of making strengthening changes based upon experience. Mr. Moody, a practical papermaker, spent over 20 years with International Paper Co., Panama City, Fla., and St. Regis Paper, Pensacola.

Three major points are made for the device: (1) it reduces labor in that the operator has push-button control, eliminating the need of a man (usually 4th hand) wielding a knife while another wets the core, permitting them to continue tasks at the rewinder; (2) it saves paper (up to 200 lb. each change) as it is swift and sure at reel changing time; and (3) it promotes safety by eliminating a hazardous task. Under accepted practice a man is required to go under the sheet with a hand knife where he works in a cramped position subject to slipping, dropping the knife because of friction burn of the hand, or having the sheet break or split. There's always that chance of this man being caught in the nip and drawn under the reel.

Installed at the reel, the compact electrically-operated cutter transversely cuts the sheet for transfer from full reel to empty core in a swift operation. It makes a smooth cut, straight across the sheet in the same position each time. The knife cannot slip out of the sheet because it works on a swivel bearing so that the paper runs past the knife on both sides causing it to position to the correct angle regardless of machine speed or the cutter's transverse movement.

Wetting of the core is performed in proper sequence through electrically controlled valves which turn the water on through showers arranged to wet only the base of the core, with automatic cut-off when the operation is completed.

When not in use, the cutter rests at the back side of the reel. The push-button control is on operating side. To change from full reel to empty core, the operator presses a "reverse" button, causing the cutter to move to the front or operating side to its prearranged position, where, as the knife is inserted into the sheet, the automatic spray wets the empty reel spool. As the strip of paper is broken onto the empty reel, the "run" button is pressed and the uplifted knife moves swiftly (350 fpm or up according to machine speed) on its carriage across the sheet, cutting the tail and completing the turning up. The cut completed, the knife retracts, the water shuts off, and the carriage becomes inactivated at the back side until brought into use again.

For convenience and added safety, the control includes an instantaneous "stop" button with which the knife (operation) can be stopped and the device returned to back side without further action.

Application of the automatic tail cutter following and under the last dryer is quite effective at machine startup or when the paper breaks. Its use voids need of a man going in on a catwalk or having to cut the sheet on around the dryer for transfer through the calender stack. Here the same procedure results when the backtender manipulates the push buttons. The knife remains at the sheet piercing station (4 to 10 inches in) until the tail has been threaded, at which time the "run" button is pressed. The automatic cutter placed here releases a man for other duties.

Hand cutting of the tail between dryer and calender is a terrifically hot job, with a hazard of the sheet snapping off and wrapping the dryer roll, pinning the man before he can escape. The efficient automatic cutter minimizes the time during which the sheet runs to the basement, an important factor considering that overloading the broke beater and causing excess broke stock may upset paper test and possibly slow down the machine because of slower drying. A cutter can pay for itself in two or three hours here.

Location ahead of the size press or breaker stack in the dryers is equally effective.

All cutters are equipped with heat and moisture-proof motors, electrical wiring and controls.

Those Calders Share Many Golf Records

Six holes-in-one is the astounding golf achievement of Alexander "Sandy" Calder, president and chairman of Union Bag & Paper Corp.

He and his three sons make up a terrific golfing quartet. He and Alex, Jr., executive v.p. of Union, tied for the N. Y. Metropolitan father-and-son title when the latter was 11. Son Stan twice won the N. J. State Amateur, also the Army title in Paris, and holds three course records. Fred, the youngest, made a 298-yd. hole-in-one.

Monsanto Sets Up New Paper Chemicals Lab

A new paper chemicals laboratory has been opened in St. Louis by the research department of Monsanto Chemical Company's Organic Chemicals Division.

The laboratory, which duplicates facilities formerly at the company's Everett, Mass., location, is part of the division's research expansion program now underway.

It will be used primarily in customer service work and in application studies with the fortified rosin sizes which Monsanto markets under the trademark, Mersize.

In addition, the laboratory will conduct screening and preliminary evaluation studies of new or improved products for the paper industry.

Monel shower tube has nonplug type nozzles soldered on at plant of A. E. Broughton & Company, Glens Falls, N. Y. Broughton uses Monel because of its excellent resistance to corrosion by white water and its high rigidity, which allows long unsupported tubes.

Use Showers? Look at this one

Monel to prevent clogging and sagging

There'll be fewer problems on the paper machine that gets this Broughton self-cleaning white water shower.

It takes but a moment to see why...

The design is uncomplicated. All parts are precision built. A cleaner unit in the nozzle tube is reversed by a 4-way valve, scraping dirt and stock from nozzles and tube, and discharging to gutter.

And have you noticed the nozzle tube and the return tube? *Both are made of Monel®.*

If you're using Monel anywhere in the mill, you're probably familiar with the outstanding characteristics of this versatile Inco Nickel Alloy.

You know, for example, that Monel is stronger and tougher than mild steel. That it withstands wear and abrasion. That it stubbornly resists corrosion by white water, caustic liquors and alkaline cleaning solutions. That it has the rigidity necessary to prevent even a long shower tube from sagging.

You understand then why Monel outlasts conventionally used nonferrous metals . . . how it contributes to fast, improved production . . . how it helps you hold maintenance costs within reasonable limits.

Put Monel to work for you in showers, too. Write *A. E. Broughton & Company*, Dept. M, Glens Falls, N. Y., and ask for their catalog, *Broughton Systems for Paper Machines*. The company offers a full line of stationary and oscillating fresh and white water showers for cleaning Fourdrinier wires, dandy rolls, cylinder moulds, savealls and other machines. All, of course, are made with Monel—to serve you better.

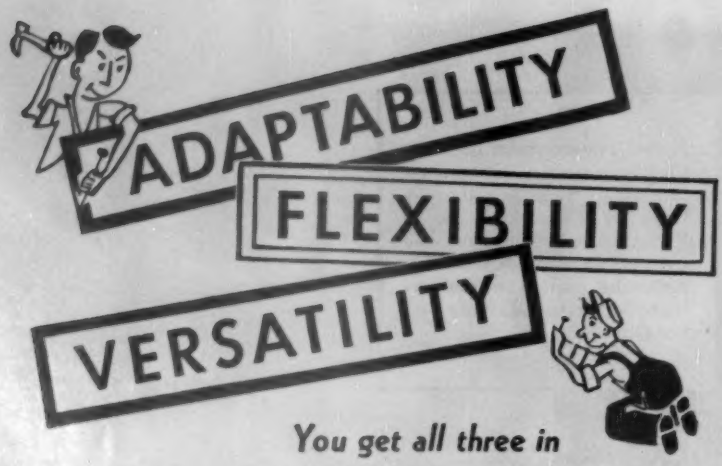
You yourself can specify Monel for fluid filters, stock lines, doctor blades, head boxes and slices. Or Inconel® for pulp digester lining and cladding. These Inco Nickel Alloys give you superior resistance to corrosion...extra-long life . . . extra-good performance.

So don't wait. The sooner you start using Inco Nickel Alloys, the sooner you'll have fewer problems on *your* machines.

For answers to corrosion problems anywhere in the mill, write to our Corrosion Engineering Section.

The International Nickel Company, Inc.
67 Wall Street New York 5, N. Y.

Monel...*for minimum maintenance* INCO Nickel Alloys



You get all three in

WARREN

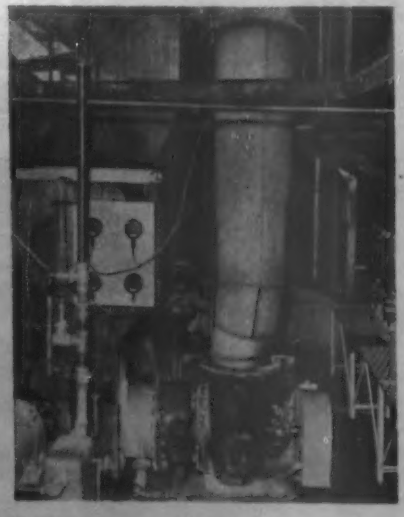
STOCK CIRCULATING PUMPS

and here is proof . . .

The Warren 18 x 24 Horizontal Propeller Circulator Pump, illustrated, was side mounted on a special bracket to provide vertical discharge rather than top horizontal.

At present it handles a capacity of 6000 GPM, at 12 foot head, 30 BHP at the pump shaft, 765 RPM pump speed, and to handle 1% stock. A 40 HP, 1150 RPM motor and V-Belt drive was chosen to allow for a future capacity of 7000 GPM, 12 foot head, 40 BHP at the pump shaft, 830 RPM pump speed. This change was to be effected by changing sheaves.

However, mill modifications will require a new capacity of 9000 GPM, 15 foot head, 57 BHP at the pump shaft. For this a 60 HP motor and a new V-Belt drive for 1000 RPM pump speed will be provided.



Photo, courtesy Escanaba Paper Company
Subsidiary of The Mead Corporation, Escanaba, Michigan

Whether it is a question of Stock Circulation, mixing, or any other Pulp or Paper Mill application, it will pay you to take advantage of Warren Pumps and Warren Engineering.

FP-36

WARREN QUIMBY PUMPS

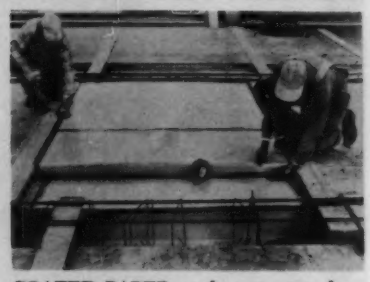
WARREN PUMPS

WARREN STEAM PUMP COMPANY, INC.

Warren, Massachusetts

NEW PAPER USE

A Special Liner For Concrete Forms



COATED PAPER used as concrete form liner reduces costs and improves quality of concrete.

A newly developed polyethylene coated paper (polyethylene by Bakelite Co., division of Union Carbide & Carbon Corp.), used as liner for concrete forms, reportedly improves both quality and appearance of concrete and reduces job costs.

This industrial product developed by Lowe Paper Co., Ridgefield, N. J., in cooperation with Permacel Tape Corp., New Brunswick, forms a smooth moisture-vapor barrier which gives the concrete a harder surface by extending curing period. The paper liner adheres to the concrete and can be left in place as long as desired even though the form be removed soon after pouring and used some place else. When the coated paper formliner is stripped off it exposes a smooth concrete surface ready for decorating without refinishing.

Safety Conference Dates on West Coast

Plans for the ninth annual labor-management safety conferences in all three Pacific Coast states have been formulated. First session is to be held Feb. 3-4 in San Francisco under State Chairman Peter Van Der Meulen, personnel director, Stockton Division of Fibreboard Products, Inc. Two weeks later the Oregon session, under State Chairman Nicholas Chicherin, personnel director, Weyerhaeuser Pulp Division, Springfield, will convene Feb. 17-18 in Portland. The Washington group, headed by State Chairman Ralph Lawrence, personnel and safety director of Port Angeles Division of Fibreboard, meets March 3-4 in Seattle.

A total of 500 will attend these meetings to study new developments in accident prevention techniques and exchange experiences on ways of making plants safer.

No maintenance problems with this instrument!

In spite of all of the development work being done on automatic control instruments, the Bristol Series 500 Air-Operated Controller is still the most dependable and trouble-free — as proved by thousands of installations. And here's why:

It's the simplest to service. Only one adjustment with a ¼ in. wrench calibrates the control system. No other adjustment is needed. Control system can be completely disassembled and, after reassembly (even with replacement parts), can be *exactly calibrated by this one simple adjustment.*

It's completely reliable. One user states, "I'm amazed at the way this instrument performs day-in and day-out with little or no attention. We call it the work-horse controller in our plant. And our plant men like to use it, because it gives them the precision results they need without having to fuss with it".

Its settings are exactly reproducible. Reset rate, derivative time, and proportional band adjustments are accurately calibrated and exactly reproducible. You can instantly reproduce established settings without cut and try.

It uses the world-famous Bristol measuring elements. The measuring systems used in Bristol Series 500 Air-Operated Controllers for TEMPERATURE, PRESSURE, FLOW, VACUUM, DRAFT, ABSOLUTE PRESSURE, LIQUID LEVEL, pH, AND HUMIDITY are the result of 65 years of experience in instrument making and application in practically every industry. Bristol measuring elements are recognized the world over for their accuracy, simplicity, and reliability. There just aren't any better measuring elements made than Bristol's.

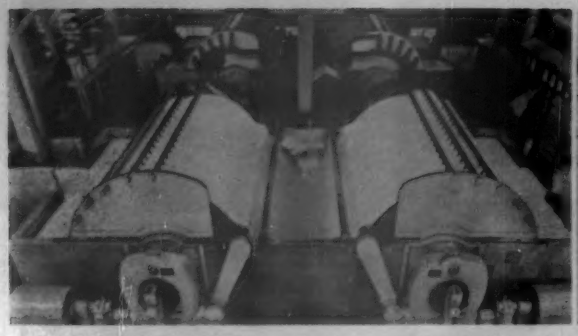
For more facts and figures about the Series 500 Air-Operated Controllers, write for free 32-page bulletin A120. The Bristol Company, 142 Bristol Road, Waterbury, Connecticut. 4.27

TRADE MARK
BRISTOL'S

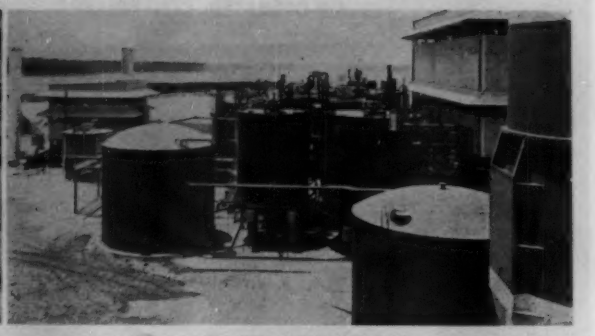
BRISTOL

POINTS THE WAY IN HUMAN-ENGINEERED INSTRUMENTATION

AUTOMATIC CONTROLLING, RECORDING AND TELEMETERING INSTRUMENTS



FOUR OLIVER DECKERS in this large southern kraft mill thicken pulp following screens. Olivers in the foreground are deckering bleached stock; those in the rear handle unbleached pulp. About 1600 Oliver filter units are in pulp and paper mills over the world.



DORR CONTINUOUS RECAUSTICIZING system at St. Regis Paper Co's. Jacksonville, Fla. mill is designed to deliver 36,500 cubic ft. of white liquor per day to digesters. This installation includes a Dorrco Slaker, three Dorrco Causticizers, a Dorr White Liquor Clarifier, Green Liquor Clarifier, two-stage Mud Washer and Dregs Washer.

Dorr-Oliver Merger Proves a "Natural"

Merger of The Dorr Company and Oliver United Filters Inc. on Dec. 31, 1954 under the name of Dorr-Oliver Inc. has special significance for the pulp and paper industry. Since the early 1900's these two companies have engineered and marketed equipment which in many instances was complementary. It is natural then, that these similar and parallel operations be merged to offer a broader service.

However, there are other reasons for the merger. Joint purchasing, research and development, marketing, and engineering will aim to reduce operating costs and permit greater operating flexibility. Dorr, with no manufacturing facilities, has all its equipment made by outside fabricators, while Oliver owns two large plants. It is possible now to schedule production to take advantage of the joint facilities. Both companies are about equal in net worth.

The companies merged previously in 1931 for three years, in a depression-inspired financial move. It proved unworkable because parent Dorr-Oliver was nothing more than a holding corporation for the operating companies. When the merger was dissolved, Dorr retained the integrated Dorr-Oliver organizations abroad to market equipment of both companies and Oliver United retained rights to the Dorrco filter.

Both companies started about the same time in the same field for almost the same reason. As a partner in a wet crushing cyanide gold mill in 1904, John Van Nostrand Dorr, faced with bankruptcy because of faulty classification, invented the Dorr classifier to effect the difficult sand-slime separation. In 1906 he developed the first continuous mechanically equipped sedimentation unit, the Dorr thickener. In 1910 he invented the Dorr agitator.

Edwin Letts Oliver developed the first Oliver filter in 1907 when he was assistant to the superintendent of a California gold mine. To reduce gold losses in the tailings, he developed an electrostatic precipitation process. Eventual solution to the problem was the Oliver continuous vacuum filter, first successful unit of its type.

RARE MEETING

Photo was taken at meeting of EDWIN LETTS OLIVER (left), Founder and Pres., Oliver United Filters, Inc. and JOHN VAN NOSTRAND DORR, Founder and Chairman of Dorr Co. Mr. Oliver headquarters in Oakland, Cal., while Mr. Dorr resides on the East Coast. They met in Oakland to discuss finalization plans for merger of two companies.

Continuous processing has been the key to success for both Dorr and Oliver. First Dorr installation in this industry was a thickener at the Roaring Springs, Pa., mill of D. M. Bare Paper Co. in 1915. Soon afterward came a crude chemical reclaiming system. In 1930 a recausticizing system which set the pattern for present thinking was installed at I.P.'s Panama City, Ala., mill.

Today over 150 kraft and soda mills throughout the world have installed Door recausticizing systems.

Valuable to the sulfite industry during the recent sulfur shortage was the Dorrco FluoSolids system, in which sulfur dioxide gas for the manufacture of sulfuric acid is produced by roasting pyrite. Systems are in operation at mills with capacity of three quarters of a million tons of pulp per year.

Among other Dorr contributions to the industry is equipment for treating industrial water and industrial wastes.

Wholly owned Dorr subsidiaries, generally operating under the name of Dorr-Oliver, are in Belgium, Great Britain, France, Germany, the Netherlands, Italy, and India. In addition, engineering representatives and agents are located in over 20 countries. This world-wide strength stems from Mr. Dorr's early vision. In 1910, when his sales staff numbered only three men, he sent one on a world-business tour.

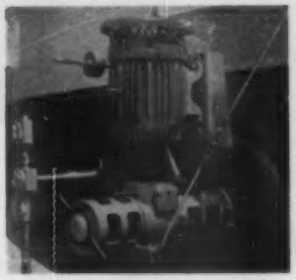
Oliver's development of equipment for this industry has almost paralleled that of Dorr. Installation in 1919 of a continuous lime mud filter at the Mead mill at Kingsport, Tenn., marked Oliver's entry into the field. This was followed in 1920 by a filter to wash soda pulp at Champion-International, Lawrence, Mass. Since then pulp and paper has been one of Oliver's prime fields.

Among Oliver units developed specifically for the industry are the Oliver lime mud filter, the American continuous filter, the Oliver vacuum save-all, and Oliver diaphragm slurry pump. Oliver revived interest in the Ahlfors upflow type screen in which the pulp flows upward through screen plates and as a direct result of this interest has developed the Oliver-Ahlfors pulp screen featuring greater filter area with reduced floor space.

More than 1600 Oliver filters with a combined filter area of over 600,000 sq. ft. have been installed in pulp and paper mills in 70 countries.

MIX LARGE VOLUMES rapidly with a turbine-type LIGHTNIN Mixer, scientifically sized to fit the requirements of your process. Available in hundreds of power-speed combinations. Fully guaranteed. Shipped ready to install.

UNIFORM 6% STOCK, without costly control measures, is produced in vertical unbaffled stock chest by heavy-duty LIGHTNIN. Sizes to 500 HP.



CUT MAINTENANCE to a new low with LIGHTNIN Side Entering Mixers in rectangular chests and smelt dissolving tanks. Shut off mixer stuffing box from tank, for repacking, as simply as turning a valve. Or specify the new, fully-tested, quickly replaceable mechanical shaft seal that eliminates *all* repacking—forever!

Do your fluid mixers give you maintenance savings like these?

There are no costly maintenance headaches hiding in the tanks you see above.

Even though the shaft on the turbine-type LIGHTNIN Mixer is 12 feet long, it runs smoothly—and safely—without the nuisance and expense of a submerged steady bearing on the tank bottom.

What's more, the gears in this mixer will never need replacement because of damage caused by flexing of the overhung shaft.

Even if someone accidentally drops a heavy sack of material on the impeller while it is turning, the shock can't reach the gears. They're protected by a unique hollow-quill construction that insulates shaft from gearing.

How interchangeable parts protect you

There are no "special" parts in the mixer. It is built entirely of standard, mass-produced components, easy to replace on short notice.

If your process should ever change, you can in all probability convert your LIGHTNIN Mixer to fit the new conditions, without drastic reconstruction. Mountings, shafts, impellers are all interchangeable.

You can change even the *speed* on a turbine-type LIGHTNIN—by replacing two easy-to-get-at gears, without dismantling the unit or taking it off the tank.

What this means to you

These advantages add up to a low rate of mixer obsolescence—as well as low maintenance cost—when you mix with LIGHTNIN Mixers.

Thousands of LIGHTNINS are in service now. Hundreds have been in service 20 years and more.

For quick, competent help on any fluid mixing operation in your mill, call your LIGHTNIN Mixer representative. Or write us today.

"Lightnin® Mixers"

GET THESE HELPFUL FACTS ON MIXING

LIGHTNIN Catalogs contain practical data on impeller selection; sizing; best type of vessel; installation and operating hints; full description of LIGHTNIN Mixers. Yours without obligation. Check and mail coupon today.

MIXCO
fluid mixing specialists

- ☐ DH-50 Laboratory Mixers
- ☐ DH-51 Explosionproof Laboratory Mixers
- ☐ B-102 Top Entering Mixers (turbine and paddle types)
- ☐ B-103 Top Entering Mixers (propeller type)
- ☐ B-104 Side Entering Mixers
- ☐ B-106 Condensed Catalog (complete line)
- ☐ B-107 Mixing Data Sheet
- ☐ B-108 Portable Mixers (electric and air driven)

MIXING EQUIPMENT Co., Inc.
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In Canada: **Greey Mixing Equipment, Ltd.**
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Please send me, without obligation, catalogs checked at left.

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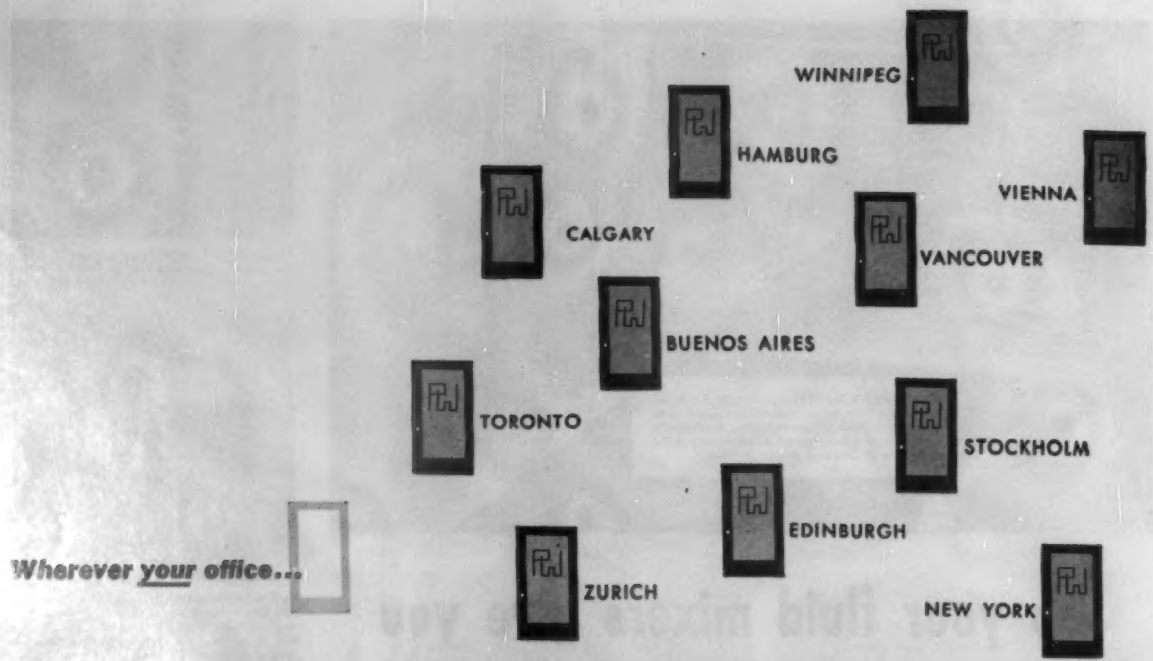
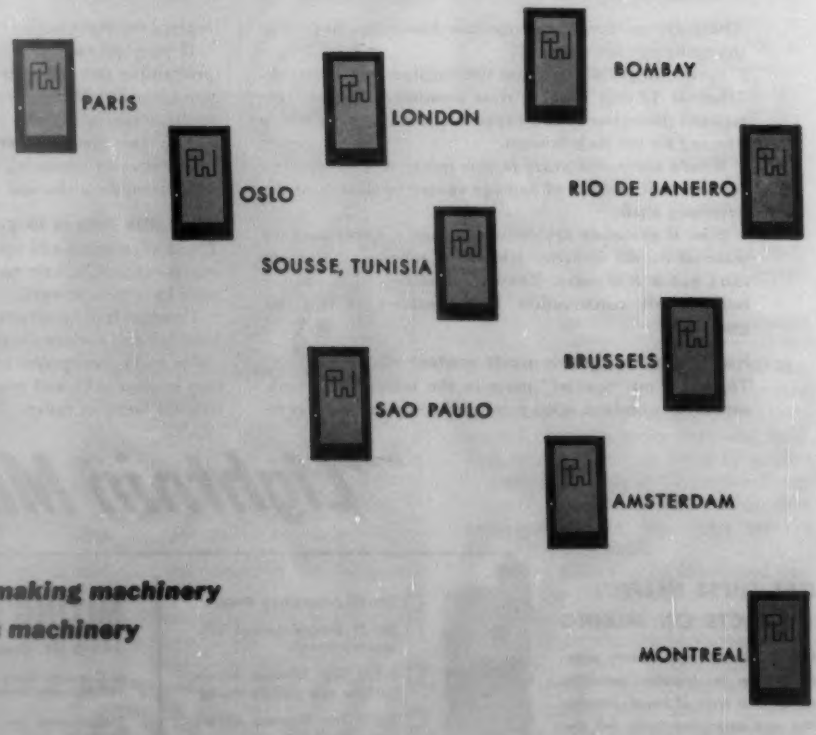


there's a PARSONS & WHITTEMORE office "next door"



for *pulp*
paper
paper-making machinery
graphic machinery

Send for our booklet entitled:
GROWING WITH THE PAPER

INDUSTRY SINCE 1903

LYDDON & CO., 35 New Bridge St., London EC4, England
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A message to PULP AND PAPER MILL MANAGEMENT

Here's how you can use

STRATEGIC PURCHASING

to help your company maintain a sound competitive position

As profit margins tighten, your purchasing strategy becomes a vital force for success.

The way you purchase heavy chemicals, for instance, can influence your company's profits in the years ahead.

So it becomes increasingly important for you to seek every possible economic advantage when you select a chemical supplier.

Here, for example, are a few things to look for, when deciding on a source for caustic soda, chlorine, and other chemicals:

1. Supply security. How flexible are your supply lines? For instance, a supplier with plants located on deep water may be able to offer you a choice of rail or water delivery. This can insure you steady supply, in case of rail service interruption.

2. Engineering help. A supplier's engineering staff can often be valuable to you when you are setting up a new bleaching process or caustic and chlorine handling systems—not only with advice, but with actual design assistance.

3. Smooth processing. You'll find it helpful to work with the supplier's technical service men who visit you periodically. Often these men can spot potential problems and ward them off before they cause you trouble.

4. Safety programs. Your men can benefit from safety suggestions offered by your supplier. You should have on tap the latest in safety equipment, plus up-to-date information on safe handling of chemicals.

5. Economy. Choose a supplier who wants to help you cut your operating costs; who will go all the way with you in arriving at the best, most advantageous method of shipping and handling for your conditions.

6. Experience. Above all, choose a supplier who is familiar with your industry. It takes years of experience to acquire an understanding of the problems you face, and the know-how to help you solve them quickly and economically.

Are you getting your fair share of these strategic purchasing advantages?

Many of our friends in the pulp and paper industry feel that they get these advantages in buying from Hooker, closely associated with the pulp and paper industry for 50 years.

In the light of the growing importance of these factors, isn't this a good time to review your policies on sources of chemical supply?

HOOKER CHEMICALS

1905—Half a Century of Chemicals from the Salt of the Earth—1955

HOOKER ELECTROCHEMICAL COMPANY

2 Union St., Niagara Falls, N. Y.

NIAGARA FALLS • TACOMA • MONTAGUE, MICH. • NEW YORK • CHICAGO • LOS ANGELES

BUS GOES "ON ROAD"

This Reliance Electric & Mfg. Co. display bus has been seen in many pulp and paper mill yards from coast to coast and was on tour of the Southeastern states in January. These are exterior and interior views.

Reliance Tours Mills With a Display Bus

When the chairman of the board of a big Wisconsin paper company stepped inside Reliance Electric & Engineering Co.'s display bus, which has toured mill towns in every area of the country, he said:

"This is what we ought to have in the paper industry. To carry our message to the people of the state."

The Reliance bus first toured mills on the West Coast where Andy Perrin, Pacific Coast manager, heads Reliance business. Rudy Herbig, of Chicago, Central West manager, had it making rounds of his important pulp and paper territory—Minnesota and Wisconsin. By January it was headed for the Southeast, after also visiting Louisiana and Texas, where Frank Denison is the manager, and New England, especially Maine, in territory of L. M. Dunning.

The 35-ft. bus houses a combined exhibit booth and conference room. It brought news and views of new motors, motor drives, etc. It has a public address system and modern interior lighting.

Chemical Linings Expands; Adds Two Directors

Chemical Linings, Inc., is expanding its plant facilities and offices at Watertown, N.Y., and as part of its growth has announced appointment of two new directors.

They are Arthur K. Hinds, president of Gould Automobile Co., Inc., Watertown, and A. J. Turnbull, treasurer of the J. P. Lewis Co. and affiliates, Beaver Falls, N.Y. Other directors are Murray H. Bennett, president; Ted E. Detcher, vice president, and E. A. Branch, secretary-treasurer.

Mr. Hinds had a long experience in the pulp and paper industry, dating back to 1912-14 when he was resident engineer at Donnaconna Paper Co. He was with Gould Paper, then back to Donnaconna as engineer in charge of expansion 1916-18, then with George F. Hardy on construction of Scott's mill in Chester, Pa., and mills at Park Falls, Wis., and Lock Haven, Pa. From 1932-42 he was officer of Climax Mfg. Co., makers of folding boxes and cartons, and Carthage Paper Makers, Inc., which supplied the boxboard.

Mr. Turnbull joined the Lewis firm, paper manufacturers, a year ago, after 15 years with the Internal Revenue Bureau.

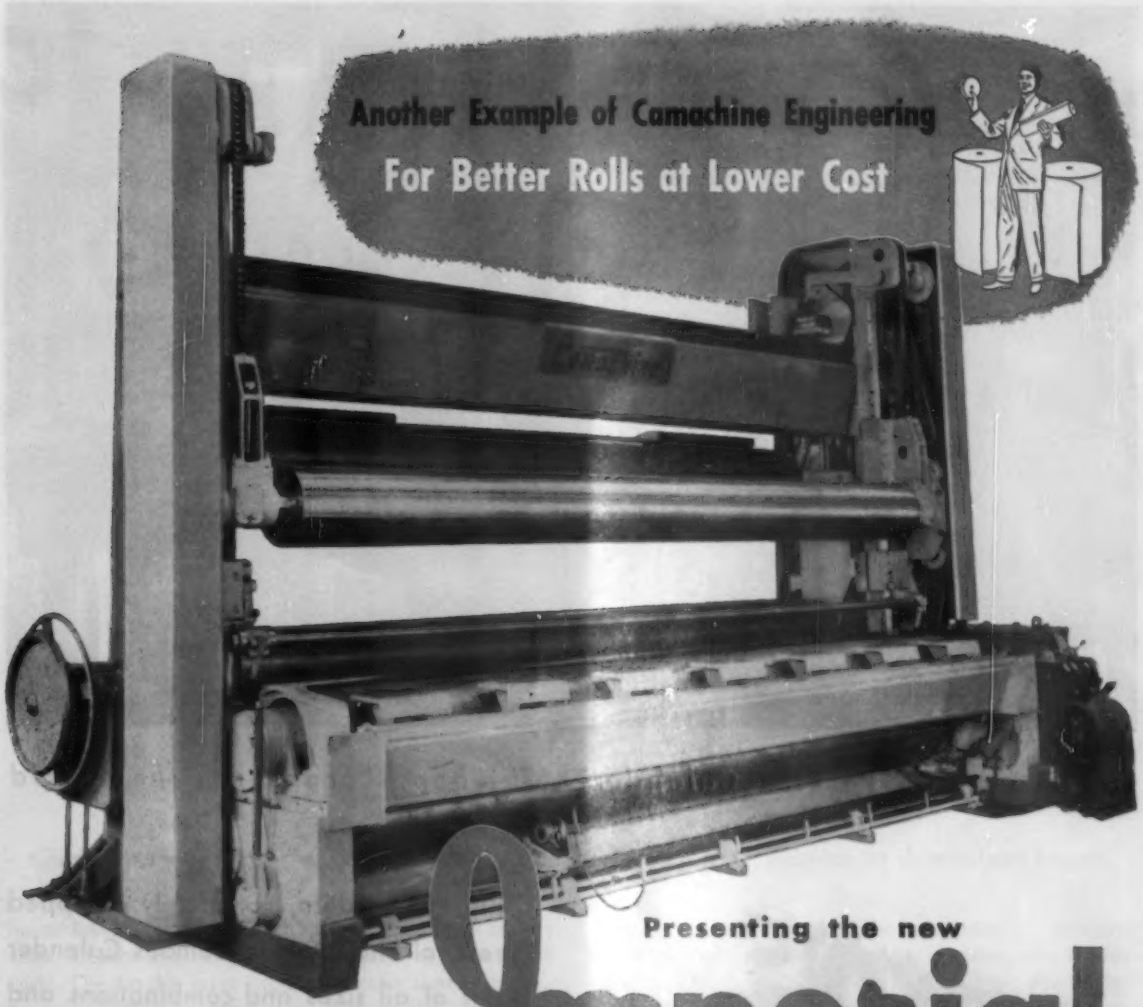
Expands Facilities for Paper Industry

Over 40 years a producer of non-ferrous cylindrical centrifugal castings for the paper industry, Sandusky Foundry Machine Co., Sandusky, O., is now producing centrifugal castings in a wide range of both ferrous and non-ferrous compositions and alloys. This was made possible by the installation of three new electrical high frequency induction furnaces.

According to V. F. Schubert, v.p., who took a PULP & PAPER editor through the plant, these first new furnaces started up about Sept. 1, 1954 and will be joined by three more now in construction and scheduled to produce by mid-1955. The combined production of these furnaces will enable Sandusky to melt enough of any of the high temperature alloys required to cast some of the largest rolls used in papermaking in one "batch."

Beloit Iron Works, Rice Barton Corp., Pusey & Jones Corp. and Downingtown Mfg. Co. are joint owners of Sandusky, with Mr. F. H. Buckingham heading it as president. James T. Gow, a new vice president, formerly with Esco, heads up Sandusky's metallurgy dept.

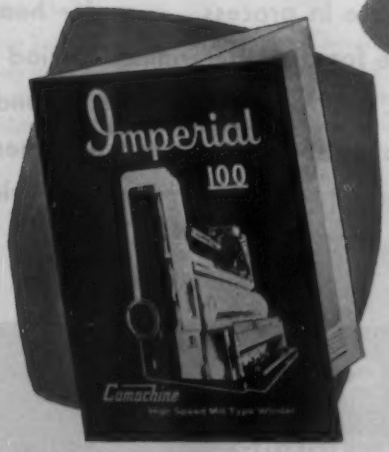
One view here shows a Sandusky Foundry & Machine Co. 54 in. suction couch roll ready for delivery to a paper mill. The other shows three new high frequency induction furnaces in the Sandusky, O., plant. The one on left is just being installed. Three more will be installed by mid-1955.



Presenting the new

Imperial

HIGH SPEED MILL TYPE WINDER



In more than a year of actual service on important installations this great new Camachine high speed winder has surpassed expectations in every feature of design and performance. Camachine is proud to present the revolutionary new Imperial line of job-proved, ultramodern mill type winders, featuring hydraulic and pneumatic controls. Camachine Imperial 100 is rated at speeds up to 7000 fpm., with rewind capacity of either 42″ or 72″ diameter, and is built in widths to suit production requirements.

◀ *This new, six-page illustrated folder, with complete specifications on the new Camachine Imperial 100, is now available. Please write on your company letterhead for your free copy.* AA-293

DON'T WIND UP WITH LESS THAN A Camachine

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Looking in on Perkins Calender Roll Shop, Largest in the World

In this modern, completely equipped press roll shop, Perkins famous Calender Rolls of all sizes and combinations and fillings are in process . . . under heavy pressure for a predetermined period of time . . . to produce Perkins Calender Rolls to meet exactly the requirements of the paper and textile industries.

B. F. PERKINS & SON, Inc.

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Southern Sales Office: **1609 Liberty Life Building, Charlotte, North Carolina**

DOW

You Can See Why

SARAN LINED PIPE

CUTS CORROSION COSTS

Corrosion resistant Saran Pipe swaged into steel is your answer to downtime losses.

Saran lined pipe, fittings and valves are built to convey acids, alkalies and other corrosive liquids at low over-all costs. The durable inner lining eliminates shutdowns due to corrosion and forms snug, tight-fitting joints that prevent leakage.

Saran lined pipes, fittings, and valves are easily and inexpensively installed. They are cut and threaded in the field with any standard pipe fitter's tools. Because of saran lined pipe's rigidity, even long spans require a minimum of support.

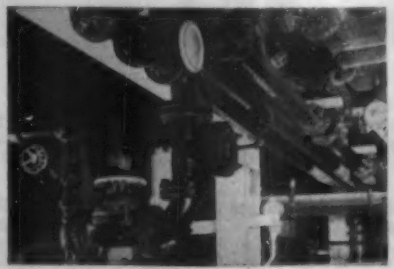
If your operation requires the conveying of corrosive liquids, and if downtime losses are troubling you, investigate saran lined pipe, fittings, and valves today. For further information, contact the Saran Lined Pipe Company, 2415 Burdette Avenue, Ferndale 20, Mich. **Dept. 526E-1**

RELATED SARAN PRODUCTS—Saran rubber tank lining • Saran rubber molding stock • Saran tubing and fittings • Saran pipe and fittings.

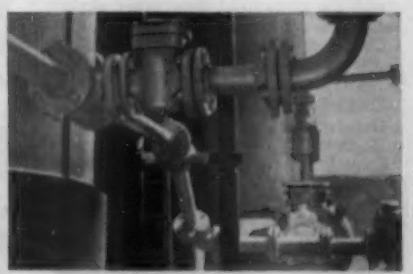
SOME OF THE MANY INSTALLATIONS USING

SARAN LINED STEEL PIPE

Saran Lined Pipe is Manufactured by The Dow Chemical Company Midland, Michigan



A large chemical company uses this installation to convey demineralized water. It has a perfect record of keeping the water free of contamination for five years!



Saran lined pipe used for conveying hydrochloric acid at temperatures from 20° to 90°C., has had no unscheduled interruptions due to corrosion for over two years!

you can depend on DOW PLASTICS DOW

Hundreds of the new TIDLAND pneumatic wind & unwind SHAFTS

are making money for 127 mills throughout the U.S. and Canada . . .

Covered by U. S. and Canadian patents

Custom-built in any length or diameter. Finest workmanship.

TIDLAND SHAFTS come in two types: (A) the leaf-type collapsible shaft for rewind, and (B) the lug-type for mill rolls. They are custom-built to meet your particular needs, using highest quality materials.

Because of their rigid construction and the tight hold they exert along the entire roll, Tidland Shafts eliminate deflections and resulting damage to cores and paper, and make higher maintained operating speeds possible.

It is not uncommon for a Tidland Shaft to pay for itself in a few weeks from this saving in time and paper. Simply designed, these shafts cost next to nothing to maintain.

Write for list of mills in your locality using Tidland Shafts.

TIDLAND SHAFTS
Manufactured by Tidland Machine Co.
CAMAS, WASHINGTON

Represented in New England by ORTON CORP., Fitchburg, Mass.

Familiar Faces, But New Duties in CZ Mills

AT CAMAS MILLS

(L to r) F. O. "NICK" BOYLON, Asst. Res. Mgr. in charge of pulp mills since March '53, is also now in charge of paper manufacturing and finishing; Asst. Res. Mgr. R. A. DUPUIS, who continues in charge of wood mill, power plant, maintenance, yard, industrial engineering, purchasing and services, and Res. Mgr. GEORGE H. GALLAWAY. Mr. Boylon was 13 yrs. with Scott Paper, finishing as Gen. Supt.; was Tissue Supt. at CZ Camas before going to Ocean Falls, B.C. three years with Pacific Mills, leaving there as Asst. Res. Mgr. to take same position at Camas.

AT CZ WEST LINN MILL

(L to r) GLEN D. KING, recently promoted to Asst. Res. Mgr., has been with CZ since '45, joined this mill in '51 as Asst. to Mach. Supt., becoming Tech. Supervisor a year ago; Res. Mgr. M. A. OTIS; Asst. Res. Mgr. C. A. ENGHOUSE. Mr. King, a U. of W. chemistry engineer, started with CZ Port Angeles on slime control work, later becoming Tech. Supervisor there; transferred to Central Research Dept. at Camas and became Chief of Paper Development Section and later moved to San Francisco headquarters as Head of New Products Development before going to West Linn.

AT OTHER CZ MILLS

(L to r) P. T. DICKIE, new Tech. Supervisor at West Linn, joined CZ in '35 as pulp tester. He's been Tech. Supervisor of Lebanon Div., member of Port Angeles Tech. Dept., Asst. Tech. Supervisor and Tech. Asst. to Coating Plant Supt. at West Linn. He spent five years in USN during World War II, is graduate of U. of W.

C. R. (RAY) DAHL promoted to new position of Asst. Res. Mgr., receives congratulations from Res. Mgr. R. J. SCHADT. Mr. Dahl, graduate of Cooper Union in mechanical engineering and in business administration from Stanford Graduate School of Business, came with St. Helens a year ago as Project Engineer, having previously been with CZ at Port Townsend as Industrial Engineer. Prior to joining Crown Z he devoted six years to mechanical and electrical industrial engineering.

ED H. NUNN, new Res. Mgr. of eastern Crown mill, Carthage, N.Y. Graduate of U. of Brit. Columbia, he recently was Asst. Res. Mgr. at West Linn, Ore. He started with Crown there as Chemist in 1930, went to Camas for 8 years, then to the waxed paper plant in Oakland, Calif., for three. He returned to West Linn in 1941 as Tech. Supervisor.

Meet the man you can call with confidence to solve your thermal insulation problems

To insulate outdoor tanks with complete weather protection, these skilled J-M applicators follow a specification developed by Johns-Manville. Here they are fastening J-M Asbestocite* Sheets over J-M Zerolite* Insulation. J-M 85% Magnesia Insulation is also widely used for this type of equipment

He is your J-M Insulation Contractor... the man with the world's most complete insulation engineering service

"Insulation is no better than the man who applies it." Today, with rising fuel and maintenance costs, it is especially important to place your insulation job in skilled hands. The scientific application of J-M quality insulations by J-M Insulation Contractors will assure you of the maximum return on your insulation investment for years to come. Moreover, you get undivided responsibility for *all* your insulation requirements.

1. You get dependable materials—Johns-Manville manufactures a complete line of insulations for every service temperature from minus 400F to plus 3000F. From them your J-M Insulation Contractor can select the right insulation for the most dependable service on your job. To develop new and improved insulation materials Johns-Manville maintains the J-M Research Center—largest laboratory of its kind in the world.

2. You get dependable engineering—For 95 years Johns-Manville has been accumulating insulation engineering experience. J-M Insulation Engineers are called upon to solve insulation problems of every type and magnitude, in every industry. Since your J-M Insulation Contractor works closely with J-M Insulation Engineers, he brings to *every* job a high degree of training, skill and experience.

3. You get dependable application—Johns-Manville has set up a nationwide organization of J-M Insulation Contractors to serve you. These Contractors maintain staffs of insulation engineers as well as skilled mechanics thoroughly trained in J-M's proved application methods. You can have absolute confidence in their ability to apply J-M insulations correctly for trouble-free performance.

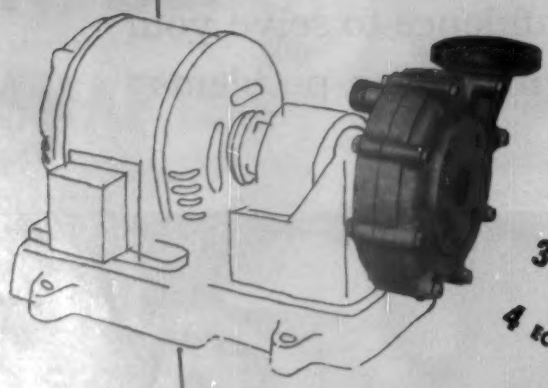
For further information and the name of your J-M Insulation Contractor, write Johns-Manville, Box 60, New York 16, N. Y. In Canada, 199 Bay St., Toronto 1, Ont.

*Reg. U. S. Pat. Off.

Johns-Manville *FIRST IN* INSULATION

MATERIALS · ENGINEERING · APPLICATION

only 1 material has all 4



...for ACID PUMPS for instance

One of the strongest plastics known . . . .Ace Hard Rubber . . . got the nod for the impeller and casings of this acid pump. Why? (1) It's resistant to almost all corrosives; (2) High strength and abrasion resistance; (3) Won't warp or swell; and (4) Costs much less than corrosion-resistant alloys. Typical result: On one job this hard rubber pump handles 12% hydrofluoric acid, turns on and off twice a minute, 24 hours a day, six days a week . . . a mighty tough test for corrosion-resistant materials?

Many other Ace hard rubber compounds are available . . . tensiles as high as 10,000 psi, moisture absorption as low as 0.04%, power factor as low as 0.006, heat resistance to 300 Deg. F. . . . also many new plastics and rubber-resin blends. All Ace compounds are tailor-made to fit the job . . . never *over*-designed. That's why Ace is the *only* material that meets all four big requirements for parts like acid pumps.

and here's a 5th

Hard rubber sleeve provides electrical insulation as well as mechanical and chemical strength in this coupling for electroplating agitator.

80-pg. Ace handbook free to design engineers.

ACE® rubber and plastic products

AMERICAN HARD RUBBER COMPANY
93 WORTH STREET · NEW YORK 13, N. Y.

EQUIPMENT & SUPPLY COMPANY NEWS

TUBULAR PRODUCTS DIV., BABCOCK & WILCOX CO., has a 6-page folder, "B&W Seamless or Welded Stainless Mechanical Tubing." Request TB 365 from their offices at Beaver Falls, Pa.

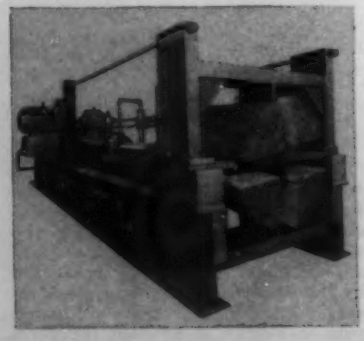
DU PONT CO. announces a new laboratory for research on pigment colors has been completed at its Newark, N.J., pigments plant.

The laboratory provides color chemists of the company's Pigments Department with the most modern facilities available for continuing work on product and process improvement.

ALLOY TUBE DIV., CARPENTER STEEL CO., has issued a new 36-page catalog on fabricating and working stainless tubing and pipe. Each of 11 types of fabrication is described, with drawings, photographs, and helpful hints for economical fabrication. Write the company, Union, N.J.

HERCULES POWDER CO. announces additional manufacturing facilities for production of wet-strength resins for paper will be built at its Holyoke, Mass., Plant. "The facilities are necessary to meet rapidly increasing demands for these resins," said R. Rockwell, general manager of the Paper Makers Chemical Dept. It will be in operation early in 1955.

COCHRANE CORP.'S continuous blow-off system is said by the company to effect substantial savings in heat and fuel. Ask for Publication 5700.



Break Down For Clipper

For breaking down logs too large for the chipper, a new Murco Hydraulic Wood Splitter has capacity of about one log per minute. It takes half this time to load the splitter. So that handling and the number of operations are reduced to a minimum, the new Murco Splitter is equipped with a stationary axe that quarters the wood at one stroke. It takes wood up to 36 in. dia. Write D. J. Murray Mfg. Co., Wausau, Wis., for particulars.

You can rely on

PENNSALT CHEMICALS

WESTERN MADE FOR WESTERN TRADE

PENNSALT Chemicals are made in the West for Western industry. It means a wide range of chemicals right at your doorstep, fast delivery by rail and water and big savings in freight rates. Our plants and offices in the West are as near as your telephone. For quick action in ordering and for our engineering service, phone the nearest plant or office.

DISTRICT OFFICES AND TELEPHONES

Tacoma, MArket 9101; Portland, ATwater 7655; Los Angeles, JEfferson 6244

INDUSTRIAL CHEMICALS

For water sanitation and sewage disposal:

Chlorine, liquid
Anhydrous Ferric Chloride
Perchloron®
Anhydrous Ammonia

For textile processing:

Caustic Soda
Chlorine and Sodium Hypochlorite
Clor Liquid Bleach

For pulp and paper operations:

Anhydrous Ammonia
Bleaching Powder
Caustic Soda
Chlorine
Sodium Chlorate

For glass and ceramics production:

Calcined and Hydrate Alumina
Hydrofluoric Acid (aqua)
Kryolith®
Acids, Muriatic and Sulfuric

For pickling and refining of primary metals, finishing of fabricated metal parts:

Anhydrous Ammonia
Calcined Alumina
Kryolith® and Rimflux
Sulfuric and Muriatic Acids
Sal Ammoniac

For production of chemicals and allied products:

Caustic Soda
Chlorine
Sulfuric Acid
Sal Ammoniac
Sodium Chlorate
Potassium Chlorate

For petroleum refining and petro-chemicals:

Acids
Ammonia
Caustic Soda
Chlorine
Anhydrous Hydrofluoric Acid

AGRICULTURAL CHEMICALS

For spraying cattle and livestock:

Penco® Cattle Spray (DDT)
Penco® BHC W-12
Penco Lindane W-25

For fruit and citrus crops and shade trees:

Penco DDT W-50
Penco Parathion W-25
Kryocide® (natural cryolite)
Penco Malathion formulations

For pest control in buildings and on the farm:

Penco Hi-Gam E-20 and W-25

For truck crops, corn, and forage:

Penco DDT W-50
Kryocide®
Penco Parathion W-25
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Penco BHC E-11
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Hi-Gam W-75 Seed Treater

Cotton Defoliants:

De-fol-ate
Endothal Defoliant S-4069

For aerial spraying of forest insects:

Penco Forest Insect Spray

Weed Killers:

Penite 6X and 35
Sodium TCA (90% wettable powder)
Sodium Chlorate

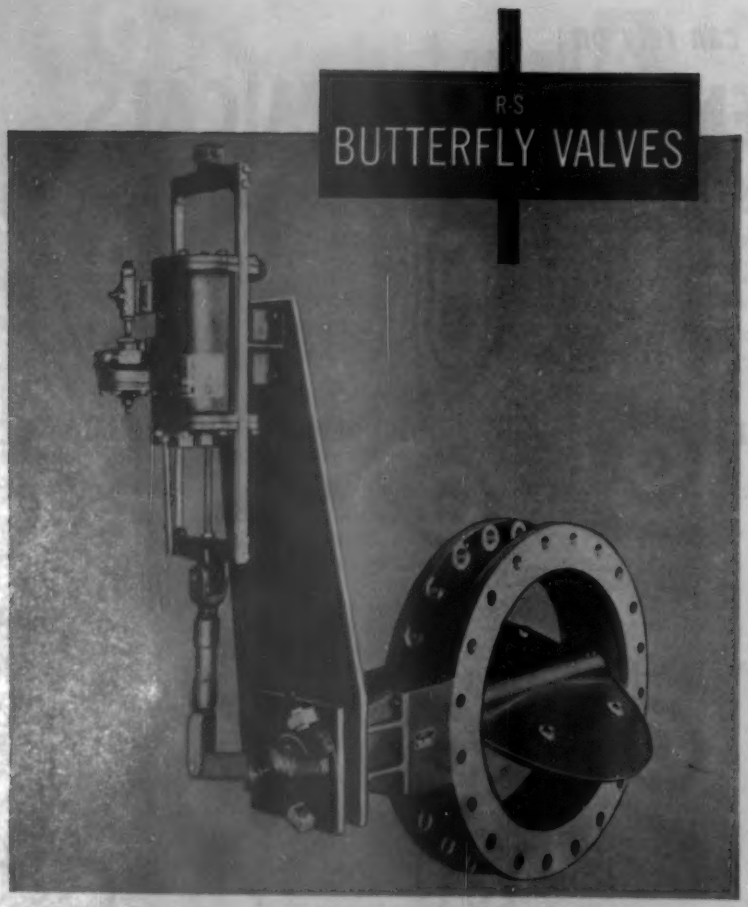
Technical products for compounders:

Penco DDT, BHC, parathion, malathion, lindane, and other technical insecticides, fungicides, and weed killers.

PENNSYLVANIA SALT MANUFACTURING CO. OF WASHINGTON

TACOMA 1, WASHINGTON

Pennsalt Chemicals



R-S VALVES FOR SENSITIVE CONTROL

These design features have won complete process control acceptance for R-S Butterfly Valves. In your processing system, an R-S Valve will give you every advantage in . . .

...complete control in all positions of normal regulating range
...fast regulation and control
...minimal pressure drop
...compactness and lightweight at less cost.

R-S Valves assure the most positive and dependable performance. They are available in any material that can be cast or welded.

The complete line of SMS valves — butterfly, cone and ball — are backed by over 75 years experience in hydraulic design and engineering. For full information on the proper valve for your process problems, check with our local representative or write S. Morgan Smith Company, York, Pa.

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Hydraulic Turbines · Pumps · Gates & Hoists · Trash Rakes · Accessories
HYDRODYNAMICS
Rotovalves · Ball Valves · Butterfly Valves · Free-Discharge Valves · Controllable-Pitch Ship Propellers

YARNALL-WARING CO., Chestnut Hill, Phila. 18, Pa., has introduced a new 8-in. Yarway remote-controlled motor-operated seatless blow valve for pulp digester service. A working model recently was shown at a Philadelphia exposition with pushbutton control and automatic lubrication unit. Also shown were new Yarway steam plant bonnetless integral-yoke blowoff valves, improved drain valves, water level gauges and indicators and steam traps.

BIRD MACHINE CO., South Walpole, Mass., has developed a new pressure filter of leaf filter design and strong construction, working pressures up to 75 psi, and special models up to 250 psi. Two of the first ones go to paper mills to clean up river water for mill use. The filter is totally enclosed against contamination and vapor. There is a removable filtrate manifold for quick adjustment of leaf centers and rapid discharge of filter cake is possible in a few minutes.

THE BRISTOL CO. is nearing completion of an expansion of its manufacturing plant at Waterbury (20), Conn. Heat treating facilities at the plant have also been recently increased to process more instrument parts and socket screws. Also provided is added room for engineering and research. Two new bulletins, outlining features and applications of the company's full line of socket screws has just been published by the Socket Screw Division of The Bristol Co. Bulletin 898 gives details on the hex type socket screws, Bulletin 899 on Multiple Spline socket screws. Both are available on request.

NATIONAL TANK & PIPE DIV., M & M Wood Working Co will start producing plastic pipe on completion of a large addition to its wood tank and pipe plant in March in Portland, Ore. Pres. Clay Brown said entry into plastics provides a wider size and use range of company products. Plastic pipe will range from ⅜-in. to 8-in. for pulp, paper and other industries. Plastic pipe will be flexible, semi-flexible and rigid pipe. Ray C. Hansen, division manager prior to 1953, has returned in this capacity to direct the new production.

DYNAMATIC DIV., EATON MANUFACTURING CO., Kenosha, Wis., offers a new Dynaspede Coupling. It is a stationary field, liquid cooled, eddy-current adjustable speed power transmission device. Driven by a constant or variable speed power source, the Dynaspede Coupling delivers torque or speed to suit specific processing requirements. Absence of all rotating electrical components provides superior performance, reflected in reduced maintenance and adaptability to hazardous, moist, dirty and other adverse locations. Write for Bulletin SF-1.

Many of the popular magazines on American newsstands are made economically possible, in large part, by "Virginia" Zinc Hydro.

"VIRGINIA" ZINC HYDRO

Produces Bright Pulp at Low Cost

Brand new techniques for the reduction-bleaching of groundwood pulp with "Virginia" Zinc Hydro are piling up profits for pulp mills.

This powerful reducing agent does a comparable job at about one-half the cost of oxidizing bleaches.

Here are some of the actual results recently reported:

- "A 12-point brightness increase."
- "Per ton costs have never exceeded 60c per brightness-point."
- "We have saved as much as $8 per ton."
- "Brightness permanence is equal to other bleaching."

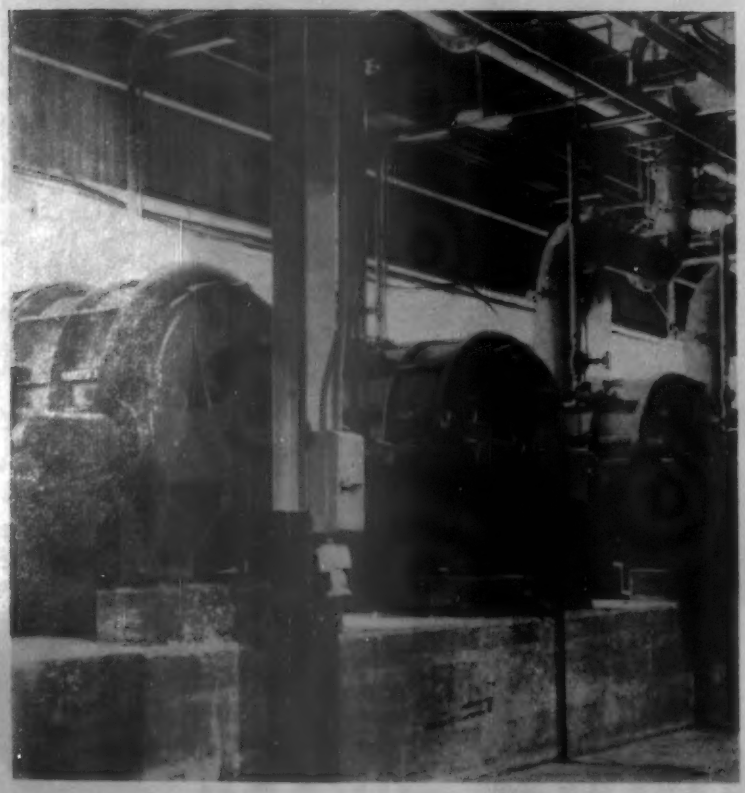
The "Virginia" Zinc Hydro process with its economies in time and efficiency applies to the big and little mill alike. Almost no new equipment investment is needed; fewer chemical additives are required. Chemically, "Virginia" Zinc Hydro is stable in storage. It is free-flowing, non-clogging and non-corrosive.

A competent, experienced Virginia engineer will be glad to discuss these new developments at your plant—just tell us when you'd like to have him come. **Industrial Department, VIRGINIA SMELTING COMPANY, Dept. 82, West Norfolk, Virginia.**

VIRGINIA Chemicals

Field Offices: NEW YORK • BOSTON • DETROIT
CHICAGO • ATLANTA • ASHEVILLE
Available in Canada and many other countries

What, actually, do Vacuum Pumps on paper machines handle?



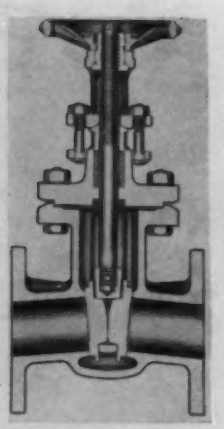
Paper mill engineers know that it is actually a mixture of air and water vapor, but the custom of rating vacuum pumps in terms of air capacity alone causes this important fact to be frequently overlooked.

The presence of this water vapor causes a considerable reduction of the effective air handling capacity of any vacuum pump except the Nash. In the Nash Vacuum Pump the bulk of this water vapor is effectively condensed, due to the Nash operating principle. The air handling capacity of the Nash is therefore not reduced.

That is one of the reasons why Nash Vacuum Pumps are standard in over a thousand leading Paper Mills.

NASH ENGINEERING COMPANY

443 WILSON ROAD, SO. NORWALK, CONN.



Crane Co. Announces New Corrosion-Resistant Valves

A new line of alloy gate, globe, and angle valves has been announced by Crane Co., 836 So. Michigan Ave., Chicago 5. Outstanding features are an exclusive split-wedge disc design in the gate valves and an improved disc-stem connection in the globe and angle valves. Valves are regularly available in Crane 18-8S Mo stainless steel and Craneloy 20 high-nickel, high-chromium stainless steel. Teflon packing is used. The split-wedge disc in gate valves is made up of two identical, circular discs placed back-to-back in a carrier. The discs have a convex trunnion on the back and an integral circumferential flange which bears on guide slots in the valve body. Since the seating load is uniformly distributed over both discs, excessive force is not required for tight seating and there is no danger of buckling of the discs.

In the new globe and angle valve disc-stem construction, the stem extends much farther into the disc, with a minimum amount of radial clearance. Chattering is eliminated.

Catalogue on Stainless Steel

A new catalogue on fabricated stainless steel piping and fittings has been produced by Alaskan Copper Works of Seattle. This 14-page booklet gives complete information and dimension standards sizes 4 in. to 48 in. O.D., and climaxes 41 years Alaskan Copper Works has supplied the industry with corrosion-resisting fittings. With advent of KA2 Stainless Steel and its acceptance in this field, Alaskan Copper facilities were changed to incorporate latest machinery for cutting, forming and welding of sheets and plate.

G-B EVAPORATORS

at BOWATERS TENNESSEE MILLS

An outstanding installation at one of the country's finest pulp and paper mills!

The advanced design and quality-controlled workmanship of Goslin-Birmingham Evaporators has contributed substantially to higher efficiencies in the Black Liquor recovery systems of many of the country's leading pulp and paper mills. This new, modern installation at the recently completed Charleston, Tennessee, plant of Bowaters Southern Paper Corporation is typical.

The G-B sextuple effect long tube, film-type Evaporators for this installation are designed to evaporate approximately 200,000 lbs. per hour of water-vapor, thereby concentrating the Black Liquor from a 14% to a 55% solid.

G-B Engineers are always available to work with you on your problem . . .

GOSLIN-BIRMINGHAM MANUFACTURING CO., INC.

BIRMINGHAM • ALABAMA

PAPER MILL ENGINEER

Established engineering company has opening for specialist in pulp and paper mill engineering and constructions.

Position will be at staff level in company's engineering department. Location in large Mid-Atlantic city.

Please write Box 210, PULP & PAPER, 370 Lexington Ave., New York 17, New York.

WANTED

Engineers or engineering draftsmen for mechanical and automatic machine design, also engineers experienced in pulp mill layouts, structural and concrete design. Give details of experience and training. Box 211, PULP & PAPER, 370 Lexington Ave., New York 17, N.Y.

JOB WANTED by Salesman/Manager

13 years experience coarse paper, packaging sales to wholesale, jobbing, retail, industrial accounts and manager small branch operation for large paper house. Want job as mill representative, branch manager, industrial sales. Good contacts Pacific Northwest, New York, Pennsylvania, but will locate anywhere. Excellent references. Reply Box 212, PULP & PAPER, 370 Lexington Ave., New York 17, N.Y.

MECHANICAL ENGINEER

Young Mechanical Engineer graduate (or equivalent in experience) to join Engineering Staff of new and expanding pulp mill in Southeastern North Carolina. One to three years experience in pulp and paper industry desirable. Salary commensurate with qualifications. Good opportunity with progressive company. Benefits include paid vacation, generous insurance and retirement plans. Our employees know of this ad. Box 209, PULP & PAPER, 370 Lexington Ave., New York 17, N.Y.

WANTED: SALESMEN. Get the most out of your calls. You can handle our paper chemicals as a side line. Exceptionally high commissions. For information which will be kept strictly confidential, write Box 202, PULP & PAPER, 370 Lexington Ave., New York 17, N. Y.

TECHNICAL SERVICE REPRESENTATIVE

Excellent opportunity available for two technically trained men with research or practical experience in surface sizing and/or coating paper. Major Mid-West starch manufacturer has openings in Mid-West and South. Replies stating personal data, education and experience will be kept confidential.

Technical Sales Service Dept.

CLINTON FOODS INC.
Clinton, Iowa

WANTED

AGGRESSIVE MAN with experience for position as Finishing Room and Warehouse Superintendent in large Pacific Northwest pulp mill. Replies will be kept strictly confidential. Submit age, education, present and past positions. Address Box 208, PULP & PAPER, 370 Lexington Ave., New York 17, N.Y.

WANTED

SUPERINTENDENT for Multiwall Paper Bag Plant located in California. Full charge all manufacturing operations. Send full details of education, age, background and industrial experience in first reply. Communications will be kept strictly confidential. Box 205, PULP & PAPER, 370 Lexington Ave., New York 17, N.Y.

Confidential Employment Service

For paper and pulp mills and paper converting plants. Our service is rendered without charge to employers seeking executives. No charge to applicant until position is accepted. We invite your inquiries.

Charles P. Raymond Service, Inc.
Phone: LIberty 2-6547
294 Washington St., Boston 8, Mass.

WANTED IMMEDIATELY

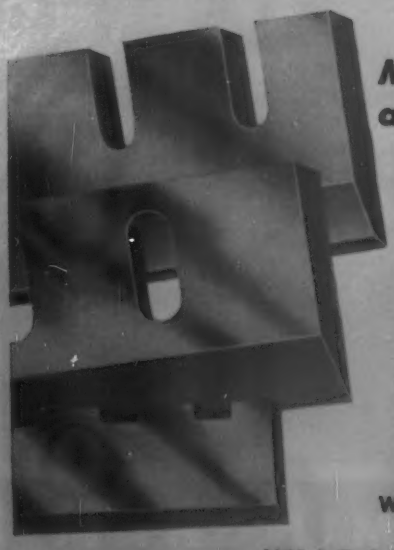
Used continuous beater in good condition with iron tub. Capacity of 1500 lb. or more needed. Reply to Box 213, PULP & PAPER, 370 Lexington Ave., New York 17, N.Y.

CHAIN BELT CO. announces the Rex Float-Treat is subject of a new bulletin. Float-Treat is a trade name assigned to a new mechanical process used to separate greases, chemical flocs, and suspended organic matter from industrial waste liquids. Request bulletin 54-82 from Chain Belt Co., Dept. PR, Milwaukee 1, Wis.

LODDING ENGINEERING CORP. celebrates its 25th anniversary with a brochure about its products and its organization, and shows applications of doctors. Ask for catalog G-4.

HI-PRODUCTION Chipper Knives

TRADE MARK SINCE 1891



More chips at lower cost

Wapakoneta HI-PRODUCTION Chipper Knives cut cleanly with fewer oversize chips and little dust waste. They take heavy feeds and cuts without chipping or cracking and retain sharp edges during long runs. Wapakoneta Chipper Knives are designed for punishing service with a minimum of reconditioning. Cut costs by cutting "down time" with Wapakoneta Chipper Knives.

WRITE for complete catalog

THE WAPAKONETA MACHINE CO.
WAPAKONETA, OHIO

Knives Engineered for the Job Since 1891

Best Hotel Value
in **DENVER, Col.**

Right in the center of things in Denver Genuine Western hospitality—400 pleasant, comfortable rooms and suites. Coffee Shop, Dining Room and Shirley Tavern serving excellent food at moderate rates. Cocktail Lounges. Garage facilities—parking.

Write for details about our popular FAMILY RATE PLAN

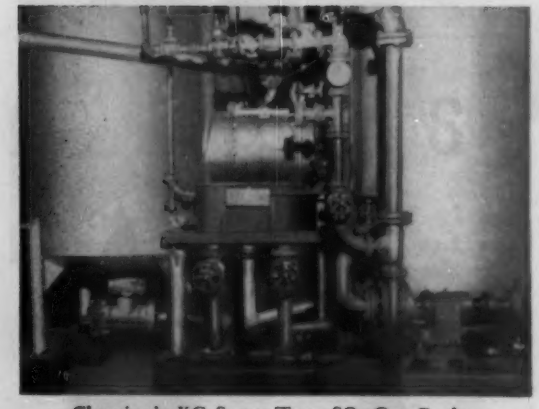
SHIRLEY SAVOY HOTEL
17th St. at Broadway

Low SO_2 Loss

Low SO_3 Formation

Low Water Consumption

with the Chemipulp-K.C. Spray-Type SO_2 Gas Cooling System



Chemipulp-KC Spray Type SO_2 Gas Cooler at Franconia Paper Corp. Primary tower at left, secondary tower at right, weir box and circulating pump in center

Heat Exchanger used with the SO_2 gas cooler

These illustrations show the spray-type SO_2 gas cooler which helps the Franconia Paper Corp., Lincoln, N. H., maintain the quality of its Profile Offset, Franconia Bond, Pressmans Bond and other fine papers.

The system consists of a primary and secondary spray tower, heat exchanger, circulating pump and weir box for water level control. Hot gas from the sulphur burner enters the top of the primary tower where it is sprayed with cooling water. The temperature of the gas is instantly dropped through the critical range of SO_3 formation so that very little SO_3 is formed. Most of any SO_3 which may be produced is absorbed by the cooling water and overflowed to the sewer. Practically no SO_2 is wasted.

The cooling is completed by a spray in the secondary tower. This cooling water, which carries some SO_2, is passed through the heat exchanger and recirculated through the tower. Part of this water is also used for primary tower spray, and make-up water is automatically added in the weir box. In case of power failure or stoppage of the circulating pump, fresh water is automatically supplied to the primary tower to prevent overheating. Final temperature of SO_2 gas leaving secondary tower is within 10° F. of the temperature of the cooling water.

The system occupies little space, is free from leaks, and is easily maintained. The men have a clean, dry place to work. Very little make-up water is required, and the hot water from the heat exchanger can be used for pulp washing and similar purposes.

Chemipulp Process Inc. Watertown, N. Y.

Associated with Chemipulp Process Ltd., 430 Crescent Bldg., Montreal

Pacific Coast Representative, A. H. Lundberg, 308 Orpheum Bldg., Seattle 1, Wash.

Resistance to wear

Famous for resistance to wear, Butterworth Calender Rolls—for coated, super, glassine or embossing applications—are furnished either new or refilled. Made of the finest long staple cotton or paper. Locked on the shaft under high pressure by either tapered wedges or screw locking. Heads and shaft are forged steel.

For full information or a quotation, write or call H. W. Butterworth & Sons Co., Bethayres, Penna.—187 Westminster St., Providence, R.I.—1211 Johnston Bldg., Charlotte, N.C.

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CALENDER ROLLS

America does business on

NEKOOSA BOND

It has the ruggedness to meet the requirements of business.

SHULER & BENNINGHOFEN
HAMILTON, OHIO
MIAMI WOOLEN MILLS ESTABLISHED 1850

Hamilton Felts

Exclusive!

Only SONOCO can supply you with famous Bermico Metal Ends, and with SONOCO Duro Returnable paper mill cores from 3" to 6" I.D. you have a core capable of withstanding abrupt starting and stopping on high speed presses. Proven superior through years of on-the-job dependability. SONOCO can also furnish the economical RHINO non-returnable core in all standard and special sizes.

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RETURNABLE

ECONOMICAL CARRIERS FOR—
• Newsprint • Wax Paper • Cash Register and Adding Machine Paper • Tapes • Cellophane
• OR any paper that can be wound on a core!

RHINO
NON-RETURNABLE

SPECIALTY CORES

Available in a wide variety of diameters, from ⅛" O.D. and up, in lengths from ½" to 24' or longer with smooth, rough or special surfaces. Supplied in solid color stock, plain or with decorative inside or outside wrap.

For Complete information and prices, write—

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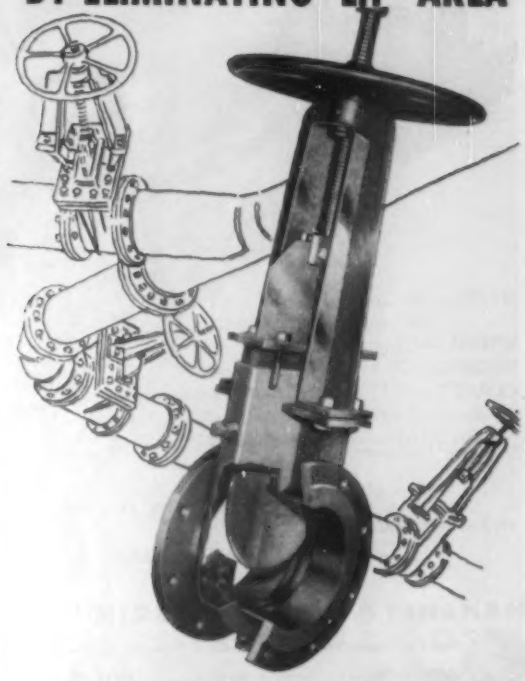
MEXICO: Sonoco de México, S. A., Apartado 10239, México, D. F.
DEPENDABLE SOURCE OF SUPPLY

PREVENT STOCK BUILD-UP BY ELIMINATING "LIP" AREA



WITH NEW ECONOMY "RUBBER SEATING" FABRI-VALVE

New "Rubber Seating" Fabri-Valves completely eliminate "lip" area leaving nothing for stock to "hang up" on. Rubber seats press tightly together when gate is open (see illustration) insuring free flow of heavy solution from port to port. Rubber seats prevent wear and galling on gate, insure tight shut-off for normal flow or back pressure, and can be easily and economically replaced. New "Rubber Seating" Fabri-Valves offer low-cost original installation and reduced maintenance. They cost less...are cheaper to ship and install. Custom fabricated in 4" to 24" size from stainless steel, monel, nickel or any alloy combination.

Write or Call for Information or Estimate

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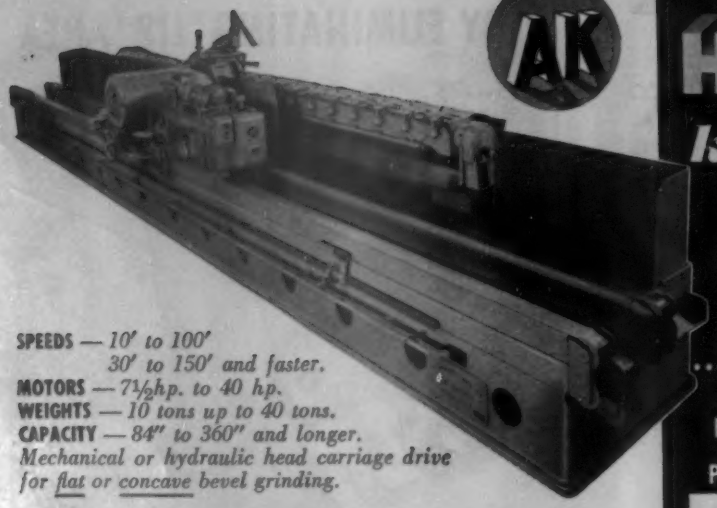

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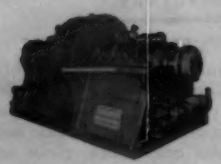
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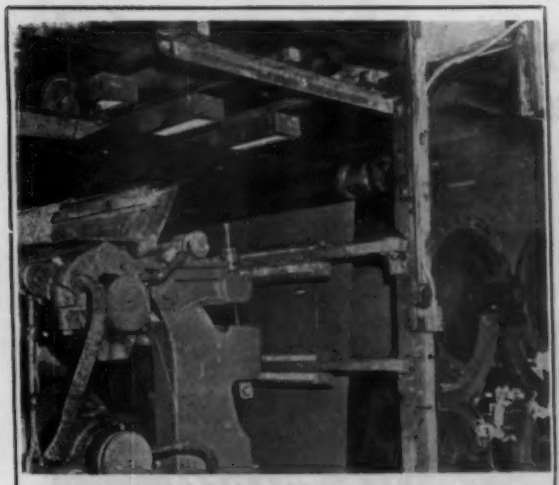

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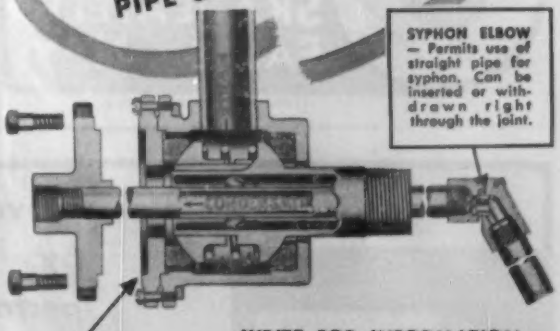
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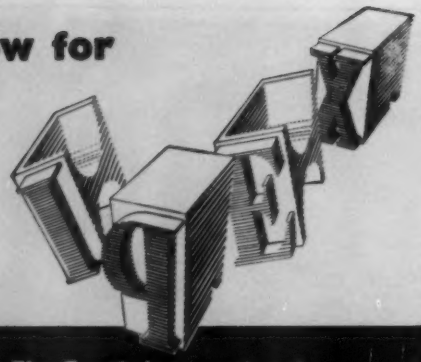

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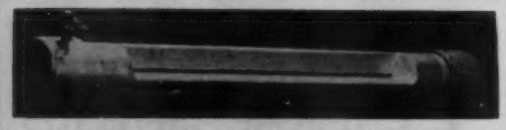

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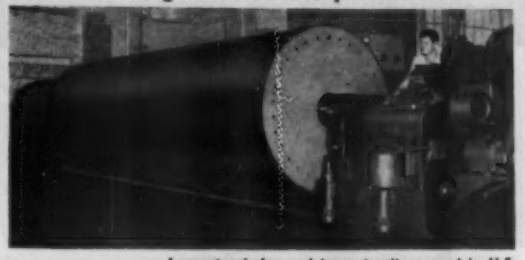

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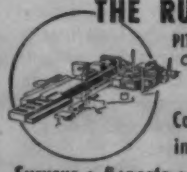
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EQUIPMENT • MATERIALS • SERVICES

FOR AMERICA'S FIFTH LARGEST INDUSTRY

Alaskan Copper & Brass Co. 129
American Air Filter Co. 24
American Cyanamid Co., Paper Chemicals Dept. .. inside front cover
American Hard Rubber Co. 114
American Logging Tool Corp. 93
Anheuser-Busch, Inc. 34
Appleton Wire Works, Inc. 7
Appleton Woolen Mills 95
Asten-Hill Mfg. Co. 50

Babcock & Wilcox Co. 47
Bagley-Sewall Corp. 20
Beloit Iron Works 9
Bingham Pump Co. 36-37
Bird Machine Co. 59
Black-Clawson Co. Divs.: Shartle Bros. Machine Co.; Dilts Machine Works; Bagley-Sewall Corp.; Pandia, Inc. 20
John W. Bolton & Sons, Inc. 39
Bristol Co. 103
Broderick & Bascom Rope Co. 93
Bulkley, Dunton Organization 91
H. W. Butterworth & Sons Co. 122

Camco Products, Inc. 18
Cameron Machine Co. 109
Chain Belt Co. 40
Chemipulp Process Inc. 121
Classified Advertising 120
Cochrane Corp. 29
Corn Products Sales Co. 69
Crane Co. 46
Keith Cranston & Assoc 128

DeZurik Shower Co. 26
Dilts Machine Works 20
Dominion Engineering Co., Ltd. .. 71
Dorr-Oliver Inc. 44-45
Dow Chemical Co. 111
Joseph H. Dupasquier 126
E. I. du Pont de Nemours & Co., Organic Chemicals Dept. 67

East Texas Pulp & Paper Co. 17
Eastwood-Nealley Corp. 14
Electrical Construction Co. 128
Emerson Mfg. Co. 39

Fabri-Valve Co. of America 123
Fischer & Porter Co. 64
Fitchburg Screen Plate Co. 127
Foxboro Co. 16

Geigy Chemical Corp. 124
General Dyestuff Co. 63
Goslin-Birmingham Mfg. Co. 119
Gottesman & Co. 49
Griffith Rubber Mills 77
Grinnell Co., Inc. 79

Hanchett Mfg. Co. 124
Hansel Engineering Co., Ltd. 92
Hercules Powder Co., Paper Chemicals Dept. 32
Hooker Electrochemical Co. 107
Hotel Shirley Savoy 120
Hubinger 2
F. C. Huyck & Sons 27

Improved Machinery, Inc. 43
International Harvester 83
International Nickel Co. 101
International Printing & Allied Trades Exhibition 126

Jacksonville Blow Pipe Co. 127
Johns-Manville Corp. 113
Johnson Corp. 125
Alvin H. Johnson & Co. 128
E. D. Jones & Sons Co. 8

Knox Woolen Co. 129

Link-Belt Co. 11
Link-Belt Speeder Corp. 85
Lodding Engineering Corp. 125
Lyddon & Co., Inc. 106

Chas. T. Main, Inc. 128
Manchester Machine Co. 30
Manhattan Rubber Div. 127
Merrick Scale Mfg. Co. 129
Mixing Equipment Co., Inc. 105
Moore & White Co. 48
Morden Machines Co. 23
D. J. Murray Mfg. Co. 10

Nash Engineering Co. 118
Nichols Engineering & Research Corp. 415
Nitrogen Div. 21
Nopco Chemical Co. 41
Northwest Copper Works, Inc. 22
Northwest Engineering Co. 89
Northwest Lead Co. 128

Roderick O'Donoghue 128
Ohio Knife Co. 75
Olin Mathieson Chemical Corp. ... 42
Oliver Corp. 13

Pacific Gear & Tool Works 25
Pandia, Inc. 20
Parsons & Whittemore, Inc. 106
Pennsylvania Salt Mfg. Co. 115
B. F. Perkins & Son Inc. 110
Perkins-Goodwin Co. outside back cover
Powell River Sales Co. 31
Puget Sound Pulp & Timber Co. .. 33
Pulp Bleaching Co. 129

W. H. Rambo 128
Raybestos-Manhattan, Inc. 127
Charles P. Raymond Service 120
Red-Ray Mfg. Co., Inc. 125
Reichhold Chemicals, Inc. inside back cover
Reynolds, Smith and Hills 128
Rice Barton Corp. 1
Ross Midwest Fulton Corp. 127
Rust Engineering Co. 128

Sandwell & Co. Ltd. 128
Saran Lined Pipe Co. 111
C. D. Schultz & Co. Ltd. 129
Shartle Bros. Machine Co. 20
Shuler & Benninghofen 122
Simonds Saw & Steel Co. 19
J. E. Sirrine Co. 128
S. Morgan Smith Co. 116
Ray Smythe Co. 124
Soderhamn Machine Mfg. Co. 80
Solvay Process Div. 38
Sonoco Products Co. 123
South Western Gear Works 25
Spencer Chemical Co. 15
Stebbins Engineering & Mfg. Co. .. 99
Stevenson & Rubens 128
Stowe-Woodward, Inc. 35
Sumner Iron Works 86
Sutherland Refiner Corp. 124, 126, 128, 130

C. T. Takahashi & Co. 125
Texas Gulf Sulphur 12
Tidland Machine Co. 112
Truscon Laboratories 28

Valley Iron Works 97
Virginia Smelting Co. 117

Wapakoneta Machine Co. 120
Warren Steam Pump Co. Inc. 102
Waterbury Felt Co. 126
Western Gear Works 25
Weyerhaeuser Timber Co. 129

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